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TRANSPORTATION

No. 74

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AIR

AVIATION'S PLEDGES FOR 1982

Moscow VOZDUSHNYY TRANSPORT in Russian 26 Dec 81 p 3

[Article: "The Socialist Obligations of Civil Aviation Workers To Celebrate the 60th Anniversary of the USSR in a Worthy Fashion"]

[Excerpt] On the basis of carrying out comprehensive plans for the economic and social development of the collectives of aviation enterprises, raising production efficiency, introducing scientific-technical advances, better use of aviation machinery and equipment, identifying reserves and bolstering steps to conserve labor and material resources, improving management, organizational, and political indoctrination work, and strengthening labor and industrial discipline — insure high-quality fulfillment of the assignments of the 11th Five-Year Plan and the plan for 1982 ahead of schedule.

1. Fulfill the state plan of the 11th Five-Year Plan: by 22 December 1985 for passenger traffic; by 1 December 1985 for use of aviation in the national economy; by 20 December 1985 for scientific research and experimental design projects; by 25 December 1985 for volume of commodity output and normative net output; by 26 December 1985 for commodity construction output; by 29 December 1985 for introduction of production capacities and housing space; by 25 December 1985 for construction and installation work; accelerate the turnover of norm-controlled working capital by two days.

2. Insure fuller satisfaction of national economic and public needs for air travel, especially for great distances and to inaccessible regions of the Far North, Siberia, and the Far East, and improve the quality of service to passengers and clients.

Deliver at least 6.25 million tons of freight and more than 125,000 tons of fruit and vegetables to the Far North, Siberia, and the Far East.

Carry at least 80 percent of the total volume of air travel in Il-86, Il-76T, Il-62, Yak-42, Tu-154, and Tu-134 aircraft. Each year open at least 20 new air routes and switch 50 routes to more productive classes of aircraft.

Open 59 new agencies and 400 offices for ticket sales.

Introduce container shipment of luggage at at least 50 airports.

Develop and launch, by 1 December 1985, ahead of schedule, an information-computing system based on collective-use computing centers, and eight integrated multilevel automatic control systems for the primary areas of transportation activity by civil aviation with an economic impact of at least 46 million rubles.

3. Insure that comprehensive testing and launching in operation is done ahead of schedule for:

- 40 new types of equipment to mechanize production processes at airports and the KTS-Il-76T, KTS-An-265, and KTS-Tu-154 BSh aviation trainers.

4. Insure a further increase in the level of flight safety and regularity. For this purpose:

- steadily improve the professional training of flight, traffic control, and engineering-technical personnel;
- improve the quality of air traffic control and technical servicing of aircraft;
- devise and introduce an instrument approach for landing system for the metric wave range SP-80 which meets the requirements of categories Nos 2 and 3 of the International Civil Aviation Organization and complete the set of tests for the centimetric wave range instrument landing approach system;
- introduce automatic objective monitoring of the actions of aircraft crews when performing drills on comprehensive airplane and helicopter trainers.

5. Continue purposeful work to conserve fuel-energy and material resources and insure:

- a reduction of at least four percent from the 1980 level in specific expenditure of aviation fuel per unit of output during the five years;
- a savings below expenditure norms of at least: seven percent for metal, five percent for cement, seven percent for lumber, three percent for furnace fuel, electricity, and heat energy, and eight percent for gasoline and diesel fuel (compared to the 1980 level);

- a savings of 2.5 million rubles of monetary capital by improving metrological support for the production activity of aviation enterprises;

- a reduction of losses compared to norms for natural loss, 10 percent for aviation kerosene and 15 percent for diesel fuel.

6. Improve the use efficiency of fixed capital by:

- reducing the prime cost of aviation work during the five years compared to the plan by at least 0.4 percent (in comparable conditions);

- mastering repair of new aviation equipment, the L-410, Il-86, and Yak-42 aircraft and the Il-62M, Tu-154, Yak-42, and L-410 aviation engines.

7. Take steps toward further social development of labor collectives, improvement of working conditions for employees in aviation, mechanization of labor-intensive jobs, and prevention of industrial accidents. To achieve these goals:

- by the end of the five-year plan raise the proportion of brigade contracts in residential construction to 50 percent;

- insure that at least 90 percent of the projects turned over for operation each year are good or outstanding in quality;

- expand the system of medical and children's preschool institutions at 107 aviation enterprises;

- complete construction and introduction of Pioneer camps for 1,520 children, preventive health clinics for 250 patients, start-up projects at the central clinical hospital for 480 patients, and the 280-person sanitarium in the Crimea.

8. Develop the scientific-technical creativity of aviation employees. Introduce at least 37,500 inventions and efficiency proposals with an economic impact of at least 31 million rubles.

9. Implement a system of steps to further improve the quality of training for specialists with higher and secondary specialized education at civil aviation schools and to organize the training of engineering-technical and management personnel for civil aviation.

10. Take all possible steps to improve work to raise the economic and currency efficiency of the operation of international air routes, expand USSR ties with foreign countries in the field of civil aviation, and promote further cooperation with the socialist countries in conformity with the Comprehensive Program for socialist integration of the CEMA countries and long-term target programs of cooperation.

11. In honor of the 60th anniversary of the formation of the USSR, insure fulfillment of the State Plan for 1982 ahead of schedule as follows: by 30 December for passenger traffic; by 25 December for use of aviation in the national economy; by 24 December for scientific research and experimental design projects; by 28 December for launching production capacities and performance of construction-installation work; by 25 December for capital repair of fixed capital; by 30 December for commodity construction output; by 28 December for volume of normative net output; and, accelerate the turnover of norm-controlled working capital by 0.4 days.

12. Overfulfill 1982 plan assignments as follows: by 1 billion passenger-kilometers for passenger traffic, including 800 million passenger-kilometers by the 65th anniversary of Great October; by 150,000 hours for calculated flying time; by 20 million rubles for profit, including at least 1 million rubles at aviation repair enterprises; by 0.4 percent for growth in labor productivity, 0.3 percent at aviation repair enterprises, and 0.1 percent at the Aviastroy PSMO [possibly Aviation Construction and Installation Production Association].

Ship at least 1.25 million tons of urgent national economic freight and more than 25,000 tons of fruit and vegetables to the regions of the Far North, Siberia, and the Far East.

13. In order to continue improving passenger service:

- perform at least 74 percent of all conveyances in Il-86, Il-62, Tu-154, Yak-42, and Tu-134 aircraft;
- continue persistent work to reduce trip delays through the fault of civil aviation employees and to increase the efficiency of use of rated airfields for category Nos I and II minimum weather conditions. By the end of 1982 raise the number of trips under M-1 conditions to rated airfields to 65 percent;
- open at least 20 new domestic air routes, including those using Il-86 and Yak-42 aircraft, and switch 60 routes to more comfortable aircraft;
- open 11 agencies and 110 offices for ticket sales;
- introduce container shipment of luggage at 10 airports and eight new types of equipment to mechanize the processes of passenger service and aviation servicing;
- introduce 10 comprehensive passenger information systems.

14. Insure a further rise in the level of safety and regularity of flight based on continued acceleration of scientific-technical progress, improvements in the organization of flight work and air traffic control, and raising the quality of technical servicing of aircraft at civil aviation enterprises. To achieve these goals:

- train for minimum category No 1: 75 percent of the crews on Il-62 and Tu-154 aircraft and 70 percent on Tu-134, Il-86, and Yak-42 aircraft; train the crews on Il-62, Tu-154, and Tu-134 aircraft for the category No II minimum to perform M-2A trips;
- master flights in category No I in the Il-76 aircraft;
- insure a further improvement in the structure of the airspace and control of air traffic and meteorological support;
- introduce 75 X-ray-television "introscopes" and 30 stationary metal detectors.

15. Increase the use efficiency of fixed capital, and for this purpose:

- reduce the time spent by aviation equipment in technical servicing relative to established norms by 10 percent for Tu-154 and Il-62 airplanes and the Mi-8 helicopter, and by three percent for repair of the Tu-154 aircraft.
- reduce the prime cost of aviation work by 0.4 percent and the prime cost of aviation repair work by 0.3 percent compared to the plan;
- reduce the specific expenditure of aviation kerosene per unit of output by 0.4 percent;
- insure reductions in expenditure norms of at least three percent for furnace fuel, electricity, and heat energy, 1.4 percent for metal, one percent for cement, and 1.4 percent for lumber.

16. Take steps toward further social development of labor collectives.

Introduce 173,000 square meters of total residential housing, dining rooms for 900 persons and children's institutions for 790 children ahead of schedule.

17. Achieve a further rise in the quality of training of aviation specialists by improving training, scientific methods, and political indoctrination work, introducing new, progressive forms and technical training aids and modern aviation ground equipment and trainers into the educational process, and strengthening ties between schools and the job.

18. Develop the scientific-technical creativity of aviation employees. Introduce 37,500 inventions and efficiency proposals with an economic impact of 30 million rubles.

19. Organize labor watches of aviation employees to celebrate the 65th anniversary of Great October, the 112th anniversary of the birth of V. I. Lenin, USSR Constitution Day, and the 60th anniversary of Aeroflot in a worthy fashion.

Expand and refine socialist competition on the basis of contracts for socialist cooperation between production collectives of the ministries of civil aviation, the aviation industry, construction, agriculture, and other departments.

The workers and employees of civil aviation assure the Central Committee of the CPSU, the Soviet Government, and General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev that they will work heroically to make a worthy contribution to the national struggle to carry out the grandiose plans of communist building outlined by the historic 26th Congress of the CPSU.

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CSO: 1829/130

AIR

PROFIT, LOSS ACCOUNTING FOR AVIATION

Moscow GRAZHDANSKAYA AVIATSIYA in Russian No 1, 1982 pp 14-15

[Article by V. Kas'yanchik, deputy chairman of the Ministry of Civil Aviation Administrative-Economic Administration: "Internal Profit and Loss Accounting"]

[Text] Among the measures worked out by the CPSU to improve planning and perfect the economic mechanism, an important place is assigned to profit and loss accounting. Its active use in economic management has been reinforced in Article 16 of the USSR Constitution.

In our sector unremitting attention is given to improving cost accounting. Theoretical studies have been done in this field and practical experience has been gained. And still it is not possible to consider this problem finally resolved.

As applied to the conditions of the operational acitivities of civil aviation enterprises there is still no unified, reliable and sufficiently verified method of internal profit and loss accounting. This is slowing down growth in production efficiency because for any operational enterprise the economic mechanism is largely determined by the level of perfection in internal profit and loss accounting.

But how to set up internal profit and loss accounting if because of the dissimilarity and incompatibility of valuation economic indicators for the various subdivisions (or services) it is impossible to compare in a practical way the results of their production activity? In order to answer this question it is necessary first of all to lay down a number of methodological propositions.

It is common knowledge that the organization of internal profit and loss accounting for an operational enterprise provides for the following: commensurability of final results from production for the entire enterprise with similar results for its subdivisions; commensurability of production capacities and the final results of production, and also costs for achieving them in accordance with planning and normative values; affording subdivisions definite rights in the operational disposition of production resources in order to meet plan targets; reinforcing fixed production capital and circulating capital for subdivisions; planning the activity of subdivisions taking into account the total indicators for the enterprise; material incentive for collectives and individual workers for qualitative and quantitative improvements in work; material responsibility for failing to meet plan targets.

Since last year, within civil aviation a new planning system has been in operation. In accordance with this system, for air transportation the basic volume indicators established are passenger traffic handled using the inventory available, and total number of departures; for civil aviation in the national economy the indicator is the number of flying hours. The new system insures objectivity in planning indicators that precisely reflect the final results of labor by subdivisions and for entire aviation enterprises. It presupposes adaptation of the organizational structure of operational enterprises to it and makes it possible to build the system of internal profit and loss accounting more rationally. How can this be improved?

In our opinion, the structural subdivisions of the enterprise subject to internal profit and loss accounting should be combined into production complexes. Each such complex should include those services and sections whose final work results correspond with one of the main volume indicators. This will provide an opportunity to make the internal profit and loss accounting system not too cumbersome but at the same time covering the main subdivisions. Those services and sections that do not have a direct yield for the main production indicators are separately handled in nonproduction complexes.

The structure of the production complexes at operational aviation enterprises could, for example, be set up as follows:

Flying and Technical Complex. This would include the services and sections engaged directly in flight operations, directly producing transportation output and the work of PANKh [expansion uknown] (flight subdivisions, navigational services, air movement services, radionavigation and communications, the operations base for radiotechnical equipment and communications, the aviation technical services, and the aircraft group in the material-technical supply section).

Commercial Complex. Services and sections responsible for commercial operations, organizing departures from airports, and a "portfolio" of orders for the use of aviation in the national economy (the freight transportation services, the PANKh section, the aircraft cabin staff, the city booking agencies, the production and dispatcher services at enterprises, and the production planning section).

Ground Technical Complex. Services and sections engaged in ground support services for flight operations (the special aviation transportation services, light engineering support, lubricants and fuels, airport services, in-flight catering services, workshops, material-technical supply section excluding the flight operations group).

Management Complex. Services and sections responsible for management activities at enterprises (technical, planning and economic and legal sections, labor management and wages sections, staffing, labor safety and safety equipment, various laboratories).

Nonproductive Complex. Hospitals, medical sanitation units, health centers, security guards, housing and and utilities services, administrative-economic sections, offices and a number of other auxiliary sections and services.

In our opinion, the distribution of elements and production results by production and nonproduction complexes should become the main methodological guarantee for internal profit and loss accounting calculations at aviation enterprises. Fixed and circulating capital, including normed assets, numbers of workers, and current expenditures (operating costs) should be assigned to the production elements. Production results are made of the volume of work completed by the subdivision (or service), labor productivity, the capital-output ratio, the capital-labor ratio, production prime cost, specific capital investments, and specific expenditures of the main material resources, including all kinds of fuel and electric power.

With this kind of structure and its methodological basis, it is possible to obtain for each period a particular indicator for economic efficiency, and also indicators for the machine-worker ration, capital-output ratio and labor-intensiveness in production.

The table below gives a graphic representation of a scheme for distribution of elements and production results by complexes in an operational enterprise. It can be seen from the scheme that the "production elements" relate to all the complexes at the enterprise, while the "production results" in both physical and cost measurements are clearly distributed only among the production complexes.

The indicator system for internal profit and loss accounting should be formed in such a way that the volume indicators seen in final production results (operational tons per kilometer and total tonnage of consignments) are established as cost accounting indicators only for the production complexes.

The principle of commensurability of actual costs and production results with the corresponding normatives and plan indicators is most important for internal profit and loss accounting. Here it is essential to clarify properly that the principle of self-support [samookupayemost'] forming the basis for cost accounting for the enterprise cannot be used internally. This is explained by the fact that no money-exchange relationships exist between the subdivisions and services. This means that there is no need to plan for them indicators such as financial result or financial-economic ratios.

Reducing material, money and labor costs and prime cost make up the base in the organization of any internal profit and loss accounting calculation. The decisions of the 26th CPSU Congress state that "Special attention should be given to improving the capital-output ratio and reducing production prime costs, and significantly strengthening the role of this indicator in evaluating the activity of and incentive for enterprise and association collectives. Achieving improvements in profitability, liquidating unprofitableness in production and increasing profit should be accomplished primarily through reductions in prime costs, labor productivity growth and improvements in the quality of output." This list of indicators constitutes the economic pivot for internal profit and loss accounting calculations for our operational aviation enterprises also.

Naturally, all the principles of cost accounting should be inseparably linked together since successful economic development at an enterprise is possible only as the result of the joint efforts by its subdivsions (or services), fulfilling

Scheme for Distribution of Elements and Production Results by Complexes.

Indicator	Unit of measurement	For entire enterprise	By complexes				
			Production			Nonproduction	
			FTC	CC	GTC	MC	NC
1	2	3	4	5	6	7	8
I.PRODUCTION ELEMENT							
1. Fixed capital	R1,000	X	X	X	X	X	X
2. Circulating capital	R1,000	X	X	X	X	X	X
normed per 1,000 of personnel	R1,000	X	X	X	X	X	X
3. Numbers of personnel	persons	X	X	X	X	X	X
4. Current expenditures	R1,000	X	X	X	X	X	X
II PRODUCTION RESULTS							
1. Volumes of work		X	X	X	X	-	-
2. Labor productivity		X	X	X	X	-	-
3. Output-capital ratio		X	X	X	X	-	-
4. Capital-labor ratio		X	X	X	X	X	X
5. Production prime cost		X	X	X	X	-	-
6. Specific consumption of fixed capital		X	X	X	X	X	X
7. Savings of resources		-	-	-	-	X	X

FTC = Flying and technical complex. CC = Commercial complex. GTC = Ground Technical Complex. MC = Management complex. NC = Nonproduction complex.

definite functions aimed at reaching common goals. Unfortunately, in practice we have not yet achieved this essential inseparable link. Just take the principle of economic-operational independence for subdivisions. In order to achieve this it is necessary to provide them with certain fixed and circulating capital. Moreover, as for the enterprise as a whole, planning, accounting and analysis of the utilization of these assets are done quarterly and annually, with the capital-output ratio being considered as one of the main accounting indicators. But this problem is far from simple. There are still no instructions on the provision of production capital for subdivisions, even though they are extremely essential.

When setting about implementing the principle of economic-operational independence for subdivisions, it is necessary to look to the quality imparted in drawing up regulations about subdivisions, services and sections and defining their functions. Lack of care in this matter complicates the development of production relations, deteriorates production management and sometimes leads to the erroneous opinion that all shortcomings are connected with the organizational structure.

Nevertheless, the main thing in implementing this principle should be the possibility for objective evaluation of the actual labor contribution made by each collective to final results of production activity at an enterprise. Thus, work indicators for aviation technical bases and radiotechnical equipment operations bases--the "number of units of technical servicing" and "volumes of work in units"--do not fully correspond with the ultimate goals of the enterprise. Using them as main indicators leads to a situation in which these labor collectives try in any case to cover their plan even when its other production indicators are unfulfilled, and this leads to increased operational costs.

Another example. One of the qualitative indicators for the air technical bases is "the good condition of the aircraft and helicopter inventory." But really, how can the established average normative for the condition of aircraft by types throughout our ministry be placed precisely as a task for the engineering aviation services? It cannot, of course! Production conditions and the production level are different everywhere. And how is it possible to consider as satisfactory for the quality of technical servicing the frequent circumstance that an aircraft can stand for 23 hours, supposedly in good condition, and then some malfunction is found only when the passengers have boarded? No one objects to calculating aircraft maintenance in aircraft hours; it is essential for analyzing the utilization of the aircraft and helicopter inventory. But the production facility needs the kind of good condition that would to a greater degree interest workers in the engineering service in the on-time and guaranteed departure of aircraft on their scheduled flights.

Yet another example. With the introduction of the new plan indicators for operational enterprises, many managements have established only "the total volume of passengers on flights" as a main production indicator for central air communications agencies. But, it seems to us, a sounder main indicator would be "operational passenger traffic." The fact is that the agencies are engaged in selling tickets (including round-trip tickets), filling flights, reserving seats, attracting tourist groups, participating in analysis of airline operations, compiling schedules for aircraft movements, and offering a whole complex of passenger services.

Thus, in order to avoid extremes when selecting indicators, it is necessary to proceed from the aims of the enterprises and subdivisions, with, of course, the main significance being given to the former. Up to now this problem has been solved in the simplest of ways: by awarding bonuses to most aviation workers not for their specific contribution to the common cause but from the results of the labor of the entire collective at an aviation enterprise.

The principle of commensuration between actual costs and normative costs to insure a given quality in production results is very important in internal profit and loss accounting. By costs we mean both monetary and material costs and also labor costs, and also the degree to which resources are utilized. Here, obvious preference should be given to expenditures and prime cost and not to nominal income and profit. It is essential to distribute all cost items among subdivisions and call for the most strict accounting, otherwise there can be no question of any kind of improvement in internal profit and loss accounting. Here, the mechanization and automation of calculations and accounts are essential.

Finally, in order to solve the problems that have been set, scientifically substantiated, progressive normatives are needed. In this direction no end of work needs to be done. The basis for optimal planning is modeling expenditure processes. It should be done using mathematical-economic methods on the basis of computers.

Taking into account the features of the country's economic development during the eighties, our aviation enterprises are engaged in strict planning and calculation of all the limits of fuel and energy resources. But obviously, we must go further and establish the plan by norm-horms, capital-output ratio, the specific consumption of fuel and energy resources, and specific capital investments.

In civil aviation the system of internal profit and loss accounting is regulated by the "Regulations for the Socialist State Production Enterprise," and by a number of sector documents on the structure of the operational enterprise and its subdivisions, services and sections. If required, regulations can be drawn up for production and nonproduction complexes at enterprises. In the long term, the main legal document for this plan in the sector should be the "Regulations on Internal Profit and Loss Accounting Calculations in Operational Enterprises of Civil Aviation" together with the instructions "Procedure for Contributions to the Material Incentive Find for Civial Aviation EP [expansion unknown] Complexes," which contains essential normative data.

Like any system, internal profit and loss accounting is inconceivable without information support. For this purpose it is most correct to use the "Passport for Operational Enterprises in Civil Aviation," which can be supplemented with special forms. Information support also includes the forms for official statistical accountability for civial aviation EP and other essential accounting documents operating at the level of production complexes.

The extensive introduction of internal profit and loss accounting in the operational enterprises in civil aviation is an insistent demand of the time, a reliable guarantee for improving production efficiency and implementing the tasks set for civil aviation by the 26th CPSU Congress.

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MOTOR VEHICLE

OFFICIALS UNDERSCORE NEED FOR MORE ROADS

Moscow IZVESTIYA in Russian 4 Feb 82 p 2

[Letter by group of officials*: "Make Roads a Nationwide Cause"]

[Text] National economic losses from lack of roads run into many billions. They are especially great in agriculture and the sectors of the agroindustrial complex. We must put an end to underestimating the importance of roads and to the view still held by some planners and managers that new roads and bridges do not increase the country's economic potential. Financing road construction, repair, and maintenance according to the "level already achieved" and providing material-technical resources according to a base established in earlier years are practices that have now become serious problems.

The people's deputies who wrote the letter to IZVESTIYA published below proposed the following:

- establish a special centralized fund for financial and material-technical support of the road system, including in it both mandatory deductions and that capital and those resources which are for some reason "frozen" and not used in other economic sectors;

- transfer capital collected on one of the nationwide communist voluntary work Saturdays to the fund for construction and reconstruction of vehicle roads;

- develop and carry out an integrated, comprehensive program to overcome lack of roads and increase the contribution made to this nationwide cause by the leading sectors of "major industry" and science, the general construction ministries and departments, and the Soviets of people's deputies.

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* [Signers of letter listed at end of article.]

Roads are quite properly compared with arteries. A national economy cannot develop normally without a far-flung network of modern highways, just as a person cannot feel healthy if the blood circulatory system is for some reason impaired. Good roads are truly a demand of the day, and therefore we believe that the newspaper IZVESTIYA has acted very correctly in its critical statement of the issues of overcoming lack of roads in the series of articles entitled "Lack of Roads Is an Enemy of the Economy," "Roads Are an All-People's Construction Project," "Ruble on the Road," "Losses from Pot-Holes," and others.

It has been estimated that national economic losses from lack of roads roughly double appropriations this year for the construction of vehicle roads. Great damage also occurs from poorly built roads which, moreover, are often improperly maintained. And how many hastily built temporary roads must be written off; how much labor and capital in the direct meaning of the words is washed away with the waters of each spring? This especially applies to departmental roads and the internal roads of kolkhozes, sovkhozes, timber industry enterprises, and the like.

There is no need to show that lack of roads is devastating. But neither should we underestimate the difficulty of solving this problem, especially in our country with its enormous territory.

It is perfectly obvious that the scale of road work presently attained is still far from meeting the needs of the national economy. What is more, vehicle roads are falling behind the growing demands of the economy. This situation is absolutely intolerable today, when the party has set forth a challenge of great historic importance: switch the entire national economy, all its sectors, to an intensified basis. We will put it bluntly: to make the economy truly intensive and economical, we must overcome the lack of roads.

The April 1980 decree of the CPSU Central Committee and USSR Council of Ministers outlined a large program of work to improve the construction, repair, and maintenance of vehicle roads in the country. It recognizes the necessity of basically completing the creation of a dense network of highways with improved surfaces by 1990 to insure reliable vehicle travel between major economic regions and populated points in the country. Plans also envision a far-reaching network of local roads that connect regional centers and administrative centers of kolkhozes and sovkhozes, above all in the Nonchernozem Zone of the RSFSR.

In the Russian Federation today more than 200 rayon centers and more than one-fourth of the kolkhozes and sovkhozes do not have normal vehicle communication because of lack of roads. There are still many wooden bridges that do not meet the higher requirements of traffic intensity and load capacity of contemporary vehicle transportation.

Lack of roads retards the economic and cultural development of the countryside and greatly diminishes the efficiency of the enormous capital investment by the state in the development of the agroindustrial complex. Indeed, it is difficult to raise the efficiency and profitability of production when the prime cost of output produced in the courtryside includes such enormous transportation expenditures, reaching 30-40 percent and more of the cost. Losses of output already raised and produced — vegetables, fruit, and milk which are devoured by the insatiable scourge of bad roads — are even greater.

Road construction is the number one question today for many kolkhozes and sovkhozes. If there are good roads they will deliver more output to supply the cities and towns. If there are good roads the economic indicators of the farms will rise sharply and many social problems will be solved better.

The decree of the CPSU Central Committee and USSR Council of Ministers states directly that USSR Gosplan and the Councils of Ministers of the Union republics must see that road construction finds an appropriate place in plans for economic and social development and that it is backed up with the necessary financial and material resources. We must take a systematic approach to development of the road system and the sectors related to it, always considering the possibilities of achieving the greatest ultimate national economic results.

Here is a simple and, unfortunately, very common economic situation. The number of vehicles on the line has increased, as has freight turnover, but the efficiency of transportation work has not risen; instead it has declined. Why is this? It is because the speed of travel of the vehicles has gone down and roads can no longer handle the increased intensity of traffic and weight of the new vehicles.

Incidentally, very few main national and republic highways have been built in recent years; most recent construction has been local roads which are ill-suited for travel by contemporary large trucks, container carriers, and large intercity buses. But the fundamental interests of the development of vehicle transportation demand a broadening of the scale of construction of highways suitable for travel at the high rates of speed of the most promising types of cars, buses, and tractor-trailer rigs in any season and under any weather conditions.

Calculations made by economic scientists provide a great deal to think about. If the freight shipping necessary for the agroindustrial complex were done on roads with improved surfaces, the increase in vehicle productivity would be sufficient to free a total of 1.2 million vehicles (figured on a four-ton average) for the country as a whole. Thus, it is true, and not just figuratively but also literally, that the load is carried by the road, not the vehicle. The most modern vehicle is helpless on a mud-choked road or bridge of decayed wood.

It is relevant to recall once again the impact of road conditions on solving the key problem of the 1980's: conservation of petroleum products. The excess consumption of light petroleum products in the country as a whole owing to bad roads reaches several million tons each year.

At the July 1978 Plenum of the CPSU Central Committee Comrade L. I. Brezhnev pointed out: "Further improvement of agricultural production and raising the standard of living of the rural population are directly linked to development of the system of vehicle roads, the main transportation links, one could say the vital arteries, of the countryside. But we have few good roads as yet. Agricultural losses from lack of roads are too large."

At the 26th party congress road construction was referred to as an important condition for successfully meeting the economic and social challenges of the country in the 1980's. Good roads are a mandatory, inseparable component part of an efficiently operating agroindustrial complex and an important element of well-organized contemporary rural areas. Of course, development of the road system in the regions of Siberia and the Far East that are being opened up is especially important. Fulfilling state plans for the extraction of energy and raw material resources with minimum transportation costs will save the national economy many billions of rubles.

It can be said without exaggeration that construction of new roads, quality repair of existing roads, and proper maintenance of them today is not simply an economic matter, but rather a question of state importance, a sociopolitical challenge. It demands daily attention from planning and Soviet bodies, ministries and departments, and enterprises and organizations. Life itself shows the necessity of the target program approach to solving this problem, which holds special state significance.

State interests demand significant amplification of the country's road building potential. We are convinced that the general construction ministries should make a greater contribution to solving the national problem of overcoming lack of roads. For example, they could take over road building in regions where territorial production complexes, major industrial centers, and other facilities which require good vehicle roads for normal functioning are under construction.

In our opinion, there should be serious consideration of the proposals to establish a centralized highway fund at USSR Gosplan for material-technical supply for road work. Such a fund could be formed through both mandatory deductions and that capital investment which ministries and departments, for some reason, do not use year after year. It is always bad for a ruble to be "frozen" and out of action; but it is twice as bad when it is idle even though it could produce a quick return in a key sector of the national economy. The road system is precisely such a sector, where the return from capital investment is very high.

Another idea that appears to deserve study is setting up a USSR management body which could support solutions to the many different problems of developing the country's road system and organize the development and implementation of a comprehensive, long-range target program.

The roads should become an all-people's construction project. We support this appeal enthusiastically and consider it essential that the people's deputies and all the millions of activists of the local Soviets look upon the road system as a paramount and vital concern.

The 26th Congress of the CPSU emphasized that the Soviets of Peoples Deputies must make fuller use of the authority granted to them by the Constitution of the USSR to eliminate lack of coordination in departmental activities. This is one of the main ways to improve management of the economy. It offers great opportunities for further development of the road system as well. We must improve organizational work in the local areas and make full use of all the opportunities presented by the Ukaz of the Presidium of the USSR Supreme Soviet entitled "Participation by Kolkhozes, Sovkhozes, and Industrial, Transportation, Construction, and Other Enterprises and Economic Organizations in Vehicle Road Construction and Repair."

The Soviets of Peoples Deputies of Saratovskaya, Kostromskaya, Vologodskaya, Sverdlovskaya, and several other oblasts are setting excellent examples of a truly state-minded approach to solving the road problem. But this is by no means the case everywhere.

An absolutely intolerable situation has developed in several republics, krays, and oblasts where capital appropriated for road construction is not fully used. In the Russian Federation, for example, the Buryatskaya ASSR and Kemerovskaya, Murmanskaya, and Omskaya oblasts did not meet their five-year assignments for building up the network of local vehicle roads. Another practice that cannot be tolerated is spreading financial, material, and labor resources of the road system over too many projects; this occurred in a number of regions in the country where the volume of incomplete road construction was 1.5-2 times greater than the norms. Republic and local Soviets of Peoples Deputies must monitor the progress of work in the road system more rigorously and give all possible help to achieve the best final results.

We also believe that every Soviet citizen can and must make a personal contribution to development of the road system. We believe the following proposal deserves consideration: the capital collected at one all-Union communist voluntary work Saturday should be transferred to the fund for construction and reconstruction of vehicle roads.

Of course, the everyday labor of those collectives which are directly carrying out the orders of the road system will be especially important for solving this problem. IZVESTIYA has already pointed out that many USSR and republic ministries and departments are at present greatly in debt to the road builders. It is time for the ministries of Petroleum Refining and Petrochemical Industry, Construction, Road, and Municipal Machine Building, and Construction Materials Industry and other "major industrial" sectors to make a greater contribution to solving the national problem of building a far-flung system of good roads.

Planning and scientific research organizations must be more actively involved in this important work. At the present time they devote little attention to pressing road problems. And the still-existing practice of certain organizations who lessen the quality of road building plans under the guise of eliminating "superfluous points" is absolutely intolerable. Often this pretext is used to remove from the plans the most essential concepts that insure high traffic speed and safety, strength, and other important qualities for the roads of the future.

The time has come to consider a significant improvement in vehicle service along the road. At any time of the day or night, anywhere on the road, people who are using the vehicle transportation system should be able to get everything they need: food and lodging, mechanical services, medical care, postal and telegraph services, everyday conveniences, and the like. The contemporary road service system includes at least 35-40 types of these services. Of course, it is a very difficult thing to organize them. Perhaps we should consider setting up an All-Union Vehicle Services Association at Tsentrosoyuz [USSR Central Union of Consumer Societies]. This association could be responsible for this sector of work.

Each year hundreds of millions of people deal directly or indirectly with vehicle transportation, and this means also with vehicle roads. It is a nationwide challenge for all the people to make our roads modern and well-appointed, to eliminate the problem of poor roads and no roads.

[Signed by] Ye. Fedyunin, deputy of the Supreme Soviet of the RSFSR, Hero of Socialist Labor, winner of the USSR State Prize, and leader of a brigade of drivers at vehicle combine No 29 of Glavmosavtotrans; N. Stupak, deputy of the Supreme Soviet of the Ukrainian SSR, driver-trainer at the Kiev Vehicle Transportation Enterprise; V. Shishkanov, deputy of the Supreme Soviet of the RSFSR, chairman of the Put' Il'icha Kolkhoz in Tul'skaya Oblast; A. Seregin, deputy of the Tul'skaya Oblast Soviet of Peoples Deputies, chief of Tulaavtodor; A. Otroumov, deputy of the Leningrad Oblast Soviet of Peoples Deputies, chief of Leningradavtodor; P. Degtyarev, deputy of the Supreme Soviet of the RSRSR, Hero of Socialist Labor, chairman of the Urozhay Kolkhoz in Volgogradskaya Oblast; Yu. Staroselets, deputy of the Volgogradskaya Oblast Soviet of Peoples Deputies, chief of Volgogradavtodor; M. Chirkov, deputy of the Novosibirsk Oblast Soviet of Peoples Deputies, chief of Nobosibirskavtodor; O. Pigunov, deputy of the Pruzhanskiy Rayon Soviet of Peoples Deputies in Brestkaya Oblast, chief of a road sector; N. Dautov, deputy of the Tselinograd City Soviet of Peoples Deputies, Hero of Socialist Labor, scraper operator of DSU-32 in the city of Tselinograd; and N. Mirchev, deputy of the Karagandinskaya Oblast Soviet of Peoples Deputies, driver of a large tractor-trailer rig

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STATISTICS INDICATE SHORTFALLS IN FUEL DELIVERY

Early December

Moscow GUDOK in Russian 9 Dec 81 p 1

[Text] Judging from the fuel transport reports which are arriving from the railroads, one might think that winter descended unexpectedly upon the railroad workers with its blizzards, freezing temperatures and snow. How else could one explain the results of fuel transport operations in the first days of December? For the week, consumers received almost 850,000 tons of coal less than the plan provided for. A large share of the blame for this problem rests with the railroad workers. Just on 2 December, the miners received from the railroad workers 4,492 fewer gondola cars than planned. For the first three days of the month, the shortfall was about 9,000 cars!

It must be noted that, as before, the workers at the controlling main lines let down the workers on the coal-shipment lines. The Oktyabr'sk, Southwestern, Southeastern and West Siberian railroads are consistently failing to fulfill the plan for transferring empty cars to control freight traffic. There are days when such railroads as the Oktyabr'sk and Southwestern do not transfer a single car. During the period 1-6 December, the Oktyabr'sk Railroad's quota was to transfer 1,800 gondola cars to control freight traffic, but it only transferred 48.

Of course, the first to suffer from a low level of discipline in controlling freight traffic are the major-coal-shipment lines. For example, the Donetsk Railroad had a coal shipment shortfall for the week of more than 370,000 tons. Certainly, such a shortfall would not have occurred if the controlling lines had transferred the planned 1,600 empty gondola cars to the Donetsk Railroad in a timely manner.

In a word, the operation of the coal transport system leaves a lot to be desired. Only the North Causcasus, L'vov, Transcaucasian, South Urals, Far Eastern railroads and the Baykal-Amur Main Line successfully dealt with the plan for coal shipment. The Sverdlovsk Railroad was alone in dealing with the increased task for coal shipment. The Moscow and Northern railroads, which previously had constantly fulfilled the plan, "stumbled" in the beginning of the month. But, judging from the coal shipment rates for the last two or three days, the workers at these railroads will be able to correct the omission in the near future.

Incidentally, the Moscow and Northern railroads began to ship petroleum products more quickly during 5-8 December. Shipments of these products also improved on the Gor'kiy Railroad, which had lagged behind in recent months. Also, the L'vov, Odessa, North Causasus, Volga, West Kazakhatan and Central Asian railroads are surpassing the schedule for liquid fuel transport.

At the same time, the situation with petroleum products shipments is very bad on the railroads in the Urals, Siberia and Far East. It is particularly bad on the West Siberian Railroad which, even in warm periods of the year, shipped considerably less fuel than the plan envisaged.

GUDOK's Fuel Shipment Control Office is awaiting a detailed answer from the West Siberian managers to the question: Why does the railroad consistently fail to fulfill the plan for liquid fuel shipments?

Early January

Moscow GUDOK in Russian 13 Jan 82 p 1

[Text] More and more fuel is needed these days for the national economy's requirements. Unfortunately, from the first days of the new year, the railroad workers and miners have allowed shortfalls in their work. For the first four days of January, the shortfall for coal shipments was almost 1.2 million tons and liquid fuel shipments were short by more than 360,000 tons. The situation became more strained during the succeeding days when very cold weather arrived. Transport came to a standstill due to a lack of freight cars, which were not being unloaded quickly enough. On the other hand, the miners didn't make use of the rolling stock which was provided to them. In a word, both groups of workers were at fault.

How are the neighboring workers correcting the situation? The railroad workers paid a great deal of attention to transferring cars to control coal shipments. Already on 3 January, the Donetsk Railroad received 5,100 empty gondola cars, which enabled fuel shipments to be accelerated.

The workers on the Tselina Railroad service the miners and have particular complaints against them. Tselina's large task for fuel shipments is unprecedented. To fulfill the task, very precise interaction is needed between the railroad workers and the miners. Due to the Ministry of Railways' efforts, the Tselina Railroad was provided with the necessary number of gondola cars. But the miners at the Ekibastuz coal field were not prepared for a large volume of work. For the first five days in January, loading operations on the spur tracks were short by 700 cars. On 6-7 January, the coal mines refused in writing to accept 940 cars for loading. As a result, shipments from this coal field are now short by 170,000 tons of "black gold."

The Alma-Ata Railroad workers can provide considerably more cars than the task envisaged. However, during the second ten days of January the miners requisitioned 87 fewer cars than called for in the plan, although a lot of fuel was piled up.

The controlling railroads must play a major role in successfully resolving problems of fuel transport. One must say that under extremely unfavorable weather conditions, most main lines have succeeded in properly organizing transfers of empty cars after they have been unloaded. Unfortunately, there are those railroads where parochial tendencies still flourish. The Oktyabr'sk, South Urals and Alma-Ata railroads are not fulfilling their tasks for freight shipment control. The West Siberian Railroad is also far behind in fulfilling these tasks.

There were also interruptions in transporting petroleum products. However, the situation is improving now. The plan for liquid fuel transport is being fulfilled by the Belorussian, Oktyabr'sk, L'vov, Southwestern, Central Asian and Southeastern railroads. The Kuybyshev Railroad is picking up the pace. For a long time this latter railroad did not deal with the liquid fuel transport tasks. Whereas the average daily shipment on this railroad for the first five days of the month was 2,897 tank cars, 3,685 tank cars were shipped on 6 January and 3,649 were shipped on 7 January. However, this railroad has not yet made up its deficits.

The South Urals, West Siberian, Gor'kiy, Northern and Sverdlovsk railroads are not fulfulling the task for liquid fuel transport. These railroads are not properly utilizing their tank cars.

One must remember that demands for fuel will increase from day to day. The coal-transportating and controlling railroads must concentrate all their attention to support fuel transport. Regardless of weather conditions, the pace of unloading operations or train movements, gondola cars on coal transporting railroads must be provided first and foremost to be loaded with fuel.

Special responsibility now rests with the railroads of the central and southern areas. They are responsible for providing empty tank cars to the Kuybyshev, Gor'kiy, Sverdlovsk and Northern railroads. The Central Asian, Alma-Ata and Far Eastern railroads must supply empty cars in a timely manner to the West Siberian, East Siberian and South Urals railroads.

Report from Kemerovo

Moscow GUDOK in Russian 13 Jan 82 p 1

[Text] Kemerovo. For the first 10 days in January, the Kemerovo Railroad had a shortfall of 444,000 tons in fuel shipments to consumers. An interruption occurred at the very beginning of the month: just for the first three days, the main line had a shortfall of more than 5,000 gondola cars received to control shipments. The shortage might have been compensated by using rolling stock from which local cargo had been unloaded. But this important reserve was not effectively utilized.

Due to measures taken by the ministry, the Kuznetsk coal field subsequently received the maximum number of empty cars. Throughout last week, the coal miners announced that they were loading coal within the limits of the technical plan. The supply of fuel in storage areas exceeded the norm by almost 1.5 million tons, but the miners successfully dealt with the task only on 6, 7 and 10 January. Although the railroad workers had an excess of gondola cars, they provided cars on time to the mines and open pits only once during this period. It was the railroad's fault that the deficit increased by another 36,000 tons.

Kemerovo Railroad officials refer to the fact that the miners are not using the empty cars. It is true that everyday the miners have a loading shortfall of several trains. But the transport workers themselves, particularly the traffic service workers headed by chief of traffic service Yu. Badan, did not ensure a high level of operational work or efficiently allocate scarce rolling stock.

Now the situation on the railroad and the coal miners' spur tracks is becoming normal. It is important to work evenly every day to compensate for the shortfalls.

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CSO: 1829/102

OCEAN AND RIVER

MARITIME FLEET MINISTER REVIEWS 1981 WORK, 1982 PLAN

Moscow VODNYY TRANSPORT in Russian 24 Dec 81 p 2

[Speech by T. B. Guzhenko, USSR minister of the maritime fleet: "Moving Toward New Achievements"]

[Excerpts] The workers of the maritime fleet completed their assignments for the first year of the five-year plan ahead of schedule.

In coastwise shipping 4.8 percent more cargo will be carried than in 1980. All cargo presented for shipping will be delivered to its destination. All the regions of the Far East and Far North, with limited navigation seasons, fulfilled their assignments for delivery of cargo. Shipments of national economic cargo to Sakhalin and Kamchatka are matching assigned volumes. Our ships delivered 151,000 tons of imported large-diameter pipe to Ob'-Taz Bay for the construction workers of the Urengoy—Central Zone Gas Pipeline (84 percent more than in 1980) with transshipment to the river fleet.

Under difficult navigating conditions the crew of the tanker Ulan-Bator towed a floating dock and large diesel river passenger ship from the Black Sea to the Far East.

The annual plan for sailing abroad is being fulfilled for the ministry as a whole and for all steamship companies.

The collectives of the sea-going steamship companies, the all-Union Sovfrakht [Soviet Charter] Association and the GKhO's [state economic associations] fulfilled important assignments for shipment of foodstuffs this year. The volume of petroleum and petroleum products for export and imported pipe and equipment purchased on a compensation basis increased.

We have a large specialized fleet today. But it is still not used efficiently enough. The ports of Il'ichevsk, Berdyansk, Nakhodka, Tallinn, and Leningrad have still not fully worked out the technology for handling the specialized fleet. Batches of cargo are not prepared for loading on time and ships stand 10-14 hours waiting for preparation of loading documents. As a result, a number of international lines of the Latvian, Baltic, Estonian, Black Sea, and Far Eastern companies are not fulfilling their assignments for 1981.

The main reasons that the economic indicators for use of the specialized fleet are too low are that the steamship companies and GKhO's are still working poorly with associations of the Ministry of Foreign Trade and the USSR Council of Ministers State Committee on Foreign Economic Relations and with railroad workers, and certain ports still do not give adequate attention to processing this fleet.

Despite some growth in container shipping, the GKhO's and steamship companies are still not monitoring efficient use of the stock of containers well and do not give proper attention to questions of exchange of containers among steamship companies and repair of containers in Soviet ports. The container debt of the Ministry of Railroads to the steamship companies is continuing to grow because of inadequate work in the local areas.

The sharp rise in shipping of foreign trade cargo demands special attention to improving the work of the ports and increasing the utilization of the carrying capacity of every dock and piece of machinery.

The collective of the Port of Leningrad achieved particularly high indicators, finishing the plan for the first year of the five-year plan for all basic indicators by 16 November. By the 64th anniversary of Great October 26 comprehensive brigades of dock machine operators in the Port of Leningrad had fulfilled their annual assignments.

In 1981 port workers employed in loading-unloading work were given additional benefits, supplementary pay for nighttime work was introduced, maximum bonus amounts were raised, the progressive piece-rate wages system was instituted, the length of breaks was increased, and a one-time bonus for years of service was provided. All this promoted a significant increase in shipping of import cargoes from the ports.

To increase the carrying capacity of the ports we are building specialized complexes to transship cargo and all-weather grain complexes. Work is underway to enlarge the volume of shipping in specialized vessels and to develop new and introduce more progressive standard technological processes based on the use of load-grappling attachments and units and new means of stacking packaged cargoes, timber and metal.

Nonetheless, we cannot say today that everything possible has been done to accelerate fleet processing and ship goods to customers and for export promptly. Thus, the ports of most of the steamship companies (with the exception of the Lithuanian, Georgian, Soviet Danube, and Central Asian companies) are underfulfilling the plan for number of dock workers. At the same time, a large number of dock workers are used in various auxiliary jobs.

The number of engineering-technical personnel and employees exceeds the norm in all the steamship companies of the Yuzhflot [Southern Fleet] GKhO (except the Azov company) and in the Baltic, Lithuanian, and Far Eastern companies. At 18 ports of the Yuzhflot GKhO, five ports of the Sevzapflot [Northwestern Fleet] GKhO, and 10 ports of the Dal'flot [Far Eastern Fleet] GKhO the norms for number of engineering-technical personnel and employees were also exceeded.

Losses of working time are still substantial. The amounts of whole-day and within-shift downtime for dock workers increased in the ports of the Dal'flot and Sevzapflot associations. Losses because of failure to appear at work with the permission of the administration rose, especially in the ports of the Black Sea, Latvian, Novorossiysk, Far Eastern, and Soviet Danube steamship companies.

We must emphasize once again that the final results of the work of every steamship company today depend crucially on the work of the ports and the extent to which fleet processing is organized according to continuous schedule-plans within the system of the transportation centers. For this reason we must give special attention to smoothly coordinated work with allied forms of transportation and clients.

The industrial enterprises of the Ministry of the Maritime Fleet will fulfill their 1981 plan for all basic indicators, according to preliminary figures. In comparison with 1980 the volume of output in the list of standard items will increase by 4.2 percent; labor productivity will rise by 3.7 percent with a 2.2 percent increase in average wages.

Failure to employ planned ceilings on number of personnel is a major problem in the work of industry. It has a negative effect on improvement in the use of production capacities and increasing the volume of output. This situation is particularly alarming at the Kanonerskiy Ship Repair Yard, the Riga Ship Repair Yard, and the Il'ichevsk Ship Repair Yard imeni 50-Letiya SSSR.

In the area of capital construction, the ministry fulfilled its special program for launching industrial capacities: six processing complexes with a total dock length of 687 meters and a carrying capacity of 1.76 million tons a year were put into operation in the ports of Leningrad, Arkhangel'sk, Il'ichevsk, Tallinn, and Kaliningrad and at the Oktyabr'sk port facility. The plan for launching production shops at ship repair yards with a total area of 10,900 square meters was fulfilled. Children's preschool institutions for 880 children, vocational-technical schools for 1,680 students, storage facilities for one-time storage of 2,200 tons of potatoes, vegetables, and fruit, and residential buildings with a total of 220,000 square meters were built.

The limit on capital investment appropriated to the Ministry of the Maritime Fleet for 1981 was fully used.

The limit on construction-installation work was not fully used by the Northern, Novorossiysk, Azov, Caspian, Central Asian, Far Eastern, Kamchatka, and Primor'ye steamship companies and the Administration of Educational Institutions of the Ministry of the Maritime Fleet.

Plans for building and introducing dressing rooms for port workers and long-term cargo storage facilities were not fulfilled in the Far Eastern, Sakhalin, and Novorossiysk steamship companies.

The total volume of contract work done by construction-installation and repair-construction organizations of the Ministry of the Maritime Fleet was fulfilled.

But the repair-construction trust of the Baltic and Far Eastern steamship companies and the repair-construction administration of the Central Asian, Kamchatka, and Primor'ye steamship companies did not fulfill their plans for capital construction contract work.

The managers of the steamship companies should direct attention to development of their own construction capacities, because the capital presently allocated for in-house construction is not being fully used. The repair-construction subdivisions of the steamship companies are still not well prepared to build residential and other facilities that the sector needs.

As for financial indicators, we expect to overfulfill the annual profit plan by four percent. But this index could have been better if all enterprises had fulfilled their established profit plans and not allowed large unproductive expenditures and losses. In the first nine months of the year unproductive expenditures related to primary activities even increased over last year. They rose most in the Northern, Murmansk and Far Eastern steamship companies.

Despite overfulfillment of the savings plan, a number of enterprises are not making timely payments to the budget, suppliers and banks. The primary reason for this is that their own working capital has been diverted to purposes not envisioned in the plan. Cases of violation of plan and financial discipline have still not been eliminated.

Unfortunately, it must be admitted that the accident rate in the transport fleet of the Ministry of the Maritime Fleet and technical losses rose this year over last year.

Accident rates rose most in the Georgian, Baltic, Black Sea, Northern and Kamchatka steamship companies.

The chief reason for accidents continue to be improper organization of general ship watch service and violations of Service Regulations on ships, the Technical Operating Rules, the Rules of the Road, and other normative documents. We are not adequately demanding of the employees of services and KhEGS's [expansion unknown] with respect to monitoring unconditional fulfillment of normative documents by ship crews. There are still cases where inspections of ships by supervisors are formalistic and proper attention is not given to working out precautionary measures to combat accidents on the ship. Not all places have organized effective checks on whether navigation safety services follow their own rules for ships.

A program of measures is being implemented on ships and at enterprises and organizations of the ministry to continue improving working conditions and labor protection and to eliminate the causes of industrial accidents. As a result, the accident rate for the Ministry of the Maritime Fleet as a whole was reduced 11.5 percent in 1980 and 35.3 percent for the five years.

In 1981, however, the situation with labor protection remains unfavorable at enterprises of the Soviet Danube, Azov, Caspian, Novorossiysk, Georgian, Far Eastern, Estonian, and Sakhalin steamship companies, the Northwestern

Administration of the Maritime Fleet, and the Hydrographic Enterprise. Work to prevent accidents is not satisfactorily organized in the Murmansk, Far Eastern, Soviet Danube, Azov and Central Asian steamship companies.

Inspections made by the ministry jointly with the Central Committee of the Trade Union and the GKhO's in a number of steamship companies this year showed that certain enterprise managers, engineering-technical personnel, ship captains, shop and section heads, stevedores, and foremen underestimate the importance of creating safe, healthy, working conditions at the job site and are not controlling offenders against labor and production discipline well. The violations of norms and rules for labor protection discovered at these enterprises by the inspections are not being promptly removed, and instead of daily organizational work they issue large numbers of orders and write up numerous plans of activities which, because they are not monitored by the steamship companies and state economic associations, are not carried out on time. Actual work is replaced by shuffling papers, and this has never been helpful.

In 1981 the fleet, ports, ship repair yards, and other enterprises and organizations of the sector received new specialists and workers in the common occupations on a planned basis. During this time the fleet and shore enterprises received 5,557 specialists, of whom 2,475 had higher education. In addition, 1,940 maritime transportation workers completed higher or secondary specialized schools without leaving their jobs. The qualitative composition of workers in the sector improved, with a rise in their vocational skills, political maturity, and labor activism.

But we still have not achieved a marked improvement in discipline in the fleet. Mistakes occur in matters of selecting, assigning and indoctrinating captains for long-distance ships. Not all the ships have established an atmosphere of high mutual standards and a critical attitude toward deviations from behavioral norms in work and everyday life.

Personnel work should be closely tied to the large and difficult tasks which have been given to maritime transportation. Without this it will be impossible to raise the efficiency of the sector's activity and raise the qualitative level of our work in conformity with the demands of the times.

The plan for economic and social development of maritime transportation in 1982 envisions a 0.52 percent increase in coastwise shipping and a 3.9 percent increase in incomes from overseas navigation. The volume of loading-unloading work for dry cargoes in the ports will rise by 2.9 percent, while the output of the standard assortment of items at industrial enterprises will go up four percent and profit from primary (operations) activity will increase four percent.

The fleet will receive new ro-ro and container ships of the classes Magnitogorsk, Skul'ptor Konenkov, and Ivan Skuridin, new classes of container ships with capacities of 400-500 international standard containers, bulkers with deadweights of 14,500, 19,000, 25,000, and 52,800 tons, tankers with deadweights of 4,500, 25,000, and 65,000 tons, and other modern vessels. In the seaports plans envision launching processing complexes with a carrying capacity of 730,000 tons of cargo a year. The plan envisions construction of 239,000 square meters of housing for employees of maritime transportation using central capital investment.

Special attention should be devoted to a significant improvement in capital construction and to rational and thrifty use of processed materials, fuel, electricity, and financial and labor resources. We must work persistently to improve planning and management, refine the style and methods of economic activity, and enhance the role of scientific and planning-design organizations in meeting the demand of the 26th CPSU Congress: "The economy must be economical."

Unlike the situation in past years, the steamship companies, ports, yards, and other production subdivisions received their 1982 plans for all indicators almost two months before the start of the new year. This enabled them to deliver it promptly to all collectives, including crews on ships and reinforced comprehensive and autonomously financed brigades of dock machine operators, ship repair workers and construction workers. Relying on ministry-wide organizational-technical and mass political measures, taking due account of the concrete situation, we must in the steamship companies, ports, ship repair yards, and other enterprises and organizations of maritime transportation supplement them with our own measures that guarantee fulfillment of the assignments of the state plan from the first day of the new year.

One of the important features of the 1982 plan for shipping and loading-unloading work, which distinguishes it from the plans of earlier years, is that the bulk of the work to deliver and process the increased volume of consumer goods falls in the first six months, the period of inconsistent winter and spring weather. Therefore, all the state economic associations, steamship companies, and ports must see that all technical equipment needed for unconditional fulfillment of shift-day and monthly plans for processing ships and railroad cars under any conditions is always ready.

We must make fuller use of the practices of the Leningrad transportation center and other leading collectives in each basin and each port because the NPGRTU [continuous schedule-plan for the work of a transportation center] is now and will be the key tool for operational management that makes it possible to optimize the use of the resources of all allied workers in the center. Therefore, improving cooperation with allied forms of transportation, especially railroad transportation, remains a paramount challenge at all levels.

One of the main ways to increase the volume of shipping is to improve operations work in each subdivision in order to make more efficient use of every dock, warehouse, piece of equipment and dock equipment worker.

At the present time the plan for shipping import cargo from the ports by railroad, which is being established jointly with the Ministry of Railroads, is a crucial document which must be the foundation for structuring all the work of the fleet and the ports. It should determine fleet traffic and port workloads, and all organizational and party political work in ports and steamship companies should be directed to fulfilling and overfulfilling this plan, because our ultimate objective is not so much to increase the volume of cargo handling at ports as it is to speed up the delivery of cargo to the customers and to reduce downtime for ships and railroad cars.

But as the data show, this is not fully understood everywhere yet.

Economic, party, and trade union leaders at the ports must make better use of the additional benefits established in mid-1981 for port workers engaged in loading-unloading work.

Operational planning and management of the transportation process must be refined to improve the use of the fleet, ports, and material and labor resources. We must always employ optimal decisions based on continuous schedule-plans of work for the fleet, port, and transportation center with scientifically substantiated norms and computer equipment. This is a crucial task for all operations workers in the center and in the local areas, and the fate of the plan for shipping and loading-unloading work plus the economic and financial results of the work of the sector depend decisively on handling this task.

We must take a new step forward in the development of container and stack shipping in the new year and improve its efficiency, particularly for the Cuban, Vietnamese, and Indian routes. Container shipping should be at least 8.5 million tons, 5.7 million of which should be carried by new classes of specialized ships. Stack shipping will be 15.6 million tons, including 6.5 million tons of timber. Most of it will be carried by specialized ships.

Technical operation of the fleet must be improved. As our ships become relatively older, it is important to prevent a decrease in their operating lives, a worsening of technical conditions, and an increase in fuel consumption. This is a job for the crews of the ships, the technical servicing bases, the employees of planning-design and scientific research organizations, and the management personnel of the steamship companies, state economic associations, and ministry. The continuous system of technical servicing and classification of the USSR Register should be introduced more rapidly and extensively. We must reduce the time required for ship repair in the yards by increasing the coefficient of shift work, and introducing progressive forms of organizing ship repair and new machinery, technology and mechanization.

Capital construction must be a focus of our attention. When building production, cultural-domestic, and especially residential projects by both contract and in-house methods we must make more efficient use of not only central state capital investment but also capital from the enterprise fund and the personal savings of the working people.

The associates at planning institutes must provide good plan-estimate documents to all construction projects at the right time, especially for our key projects in the new five-year plan. These include the first stage of the new port in the Tallinn region for transshipment of grain and perishable cargoes, the ferry crossings from the USSR to East Germany and West Germany, the bases for lighter carrier systems in the Arctic Basin and the Far East, the shops to build lighters at the Slavyansk and Loksa ship repair yards, the processing complexes for transshipping phosphates and sulfur in the Southern Port, and further development of the Eastern, Magadan, Riga, Tiksi and other ports.

From the first day of the new year all large and small collectives must campaign resolutely against all types of losses, mismanagement and waste. The strictest economy and thrift must be observed in the use of processed materials, spare parts, fuel-energy resources and labor. It is relevant to recall that a decrease of just one percent in fuel consumption in the transportation fleet will produce an annual savings of about 80,000 tons. And a one percent reduction in expenditures for fleet repair will lead to a savings of roughly 1.2 million rubles. Reducing navigation costs, fees and agency service will save more than 5.5 million rubles. This is a job for the command personnel of the fleet and our representatives in agencies abroad, as well as for all employees of the management apparatus.

The campaign for economy and thrift, for rational use of capital and material and labor resources demands that economic managers and party and trade union organizations of the fleet and of shore facilities be consistent and persistent in teaching all employees a sense of duty to society and imposing strict order in places where state interests are neglected.

The labor collective is very important for creating an atmosphere of cooperative, harmonious work, mutual assistance and involvement of every worker in good final results of the common labor. It is at this point that the possibilities of fulfilling production plans are determined.

Unfortunately, in the fleet, ports, yards and central administrative apparatus we often encounter managers who are unable to organize affairs and maintain order.

Our sector today needs managers who, as Comrade L. I. Brezhnev said, "organically combine exacting performance standards and discipline with bold initiative and enterprise, practicality and a business-like aptitutde with a yearning for lofty goals, and a critical attitude toward shortcomings with unwavering confidence in the historical advantages of the path we have chosen."

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BOARD CRITICIZES IRTYSH STEAMSHIP COMPANY, SPECIFIC MANAGERS

Moscow VODNYY TRANSPORT in Russian 26 Nov 81 p 1

[Article: "At the Board of Directors of the Ministry of the River Fleet"]

[Text] A meeting of the board of directors of the Ministry of the River Fleet has reviewed the question of serious shortcomings in cargo shipping by the Irtysh Steamship Company for enterprises and construction projects of the petroleum and gas industry of Western Siberia and steps to improve work to deliver the cargo. N. Zhivotkevich, chief of the Irtysh Steamship Company, presented a report to the board. He related the state of affairs with respect to shipping cargo for the enterprises and construction sites of the West Siberian petroleum and gas industry. In the last months of the 1981 shipping season the Irtysh Steamship Company eliminated difficulties in its system of planning and accounting for shipment of cargo to the oil and construction workers of West Siberia. The steamship company took appropriate steps to monitor actual loading of the ships and correct preparation of transportation documents. It also took a number of other steps to improve the system for planning the work of the Irtysh Steamship Company's fleet.

The board of directors of the Ministry of the River Fleet noted that the volumes of potential cargo shipment to the petroleum and gas regions of West Siberia in the upcoming 1982 navigation season, as outlined by the management of the Irtysh company, do not correspond to the carrying capacity of the working nucleus of the fleet, and told the managers to make all necessary calculations to determine the real potential volume of cargo shipping by the Irtysh company in the 1982 season.

The board of directors of the Ministry Fleet removed V. Beschetnykh, chief of the cargo and commercial operations service of the Irtysh Steamship Company, from his job for lack of proper monitoring of compliance with shipping rules and the authenticity of report figures and failure to take prompt steps to stop illegal activities by a number of port managers.

V. Kravtsov, chief of the Port of Tobol'sk, was reprimanded for an attempt to falsify reports on fulfillment of the plan for cargo shipping in the second quarter of the current year and for failure to monitor loading of ships at the docks of the cargo owners.

The board officially criticized N. Kolpakov, deputy chief of the Main Cargo Administration, for poor control over the state of cargo and commercial work in the Irtysh Steamship Company.

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OCEAN AND RIVER

EFFICIENCY OF OPERATIONS ON INTEGRATED RIVER SHIPPING LINES IN WEST SIBERIA

Moscow RECHNOY TRANSPORT in Russian No 10, Oct 81 pp 2-3

[Article by N. Surikov, chief of the division of technical planning of the Irtysh Steamship Company: "The Steamship Company's Integrated Lines"]

[Text] The river workers of the Irtysh basin have a large and important part to play solving the problems of accelerated development of the West Siberian fuel-energy complex.

In the 10th Five-Year Plan the collective of the steamship company provided all needed shipping for the economy of West Siberia. The assignment for conveyance of cargo and passengers was fulfilled ahead of schedule, on 20 September 1980. The steamship line exceeded its five-year plan for shipping by 3,755,000 tons of dry and petroleum cargo and 734,000 passengers, while the ports processed 5.3 million tons of pipe, reinforced concrete, cement, and other building materials beyond the plan.

Each year the steamship company works out a plan of operations work and organizational-technical measures to support its fulfillment. These documents are based on a schedule of traffic and fleet processing which envisions raising the efficiency of use of transport and roadstead vessels, floating and shore-based cranes, and comprehensive service equipment and improving traffic control for all transportation processes. The line system, which means the regularly operating permanent lines, has a leading place in calculation of the schedule and organization of fleet traffic. For these lines the steamship company, with the shipper and receiver of the cargo, works out a uniform procedure for ship travel and processing.

The first integrated lines in the Irtysh basin were organized in the 1968 shipping season and produced good results. These lines were assigned four No 732 330-kilowatt steamships and 12 1,500-ton barges; four No 10 440-kilowatt steamships, 12 1,650-ton barges, and 12 No 576 2,000-ton diesel freighters. The three lines operated a total of 20 self-propelled and 24 non-self-propelled vessels.

By the 1980 shipping season nine such lines were already in operation. They were assigned 173 vessels, 94 self-propelled and 79 non-self-propelled. This fleet carried 2,848,000 tons with a cargo turnover of 4,863 million ton-kilometers. The labor productivity of the fleet on these lines was 40-50 percent higher than average indicators. For example, the No 428 pushboats on the line Tomsk—Surgut—Tomsk, working with trains of six No R56 sections, achieved a labor productivity of 756 ton-kilometers/power-day and an assigned tonnage of 90 ton-kilometers/tonnage-day; these figures surpass the average productivity of these ships for the steamship company as a whole by 46.8 and 36.8 percent respectively.

Table 1 below characterizes changes over time in cargo shipping on the integrated lines and fleet expenditures.

Table 1

Indicators	1975	1980	1981 Plan
Number of Lines	5	9	10
Number of Vessels	50	173	193
Included in above:			
Self-Propelled	34	94	111
Non-Self-Propelled	16	79	82
Shipping Volume, tons	1,983,000	2,848,000	3,331,000
Millions of Ton-Kilometers	3,033	4,863	5,598
Decrease in Expenditures for the Fleet, rubles	151,600	230,100	261,800

During the 10th Five-Year Plan cargo turnover on integrated lines increased 60 percent, shipping volume rose 40 percent, and the economic effect rose 50 percent.

During the past five-year plan the integrated lines Omsk—Prokhorkino—Omsk (No 2188 diesel ships), Omsk—Surgut—Tara—Omsk (No 576 diesel ships), and Surgut—Tomsk—Surgut (No 428 pushboats) worked steadily.

The fast pace of development of the polar gas deposits in the Nadym and Urengoy region caused large new flows of cargo in these directions. Several lines are now functioning there: from Tobol'sk and Omsk to Urengoy, equipped with No 1743 diesel freighters to deliver dry cargo and from Omsk to Salekhard and from there to Urengoy-Nadym, served by No R77 tankers and No 758 tugs for delivery of petroleum products.

The Salekhard—Tazovskoye—Urengoy line for dry-cargo container shipping in No 326 diesel freighters began to operate in the 1981 season.

The rapid construction of the Tobol'sk petrochemical complex demanded additional shipping of sand and gravel mixture. For this reason a new integrated line Tobol'sk-Nizhnevartovsk was launched in the 1981 season with No 576 diesel freighters. Equipment, reinforced concrete, cement, and other cargo are shipped from the port of Tobol'sk for Samotolor, while the sand and gravel mixture is shipped in the other direction. The crews of these ships worked on the group plan.

Table 2 (next page) characterizes the use of the fleet on the principal integrated lines.

The Omsk—Prokhorkino—Omsk integrated line has been in regular operation since 1970. Its establishment was necessitated by the appearance of a new flow of timber cargo from the roads of the Tomles Combine to Pavlodar for enterprises in Kazakhstan. Ships of this line deliver cargoes that have travelled by combined rail and water transport directly from Omsk to Nizhnevartovsk, Samotlor, and Megion, and in the other direction carry timber for construction from Narym, Kargask, Prokhorkino, and other roads within the boundaries of the West Siberian Steamship Company.

At the same time the system of ship planning for diesel freighters assigned to lines of the Nizhnevartovsk and Surgut sectors, which have two-way loading, were changed. The plan for the crews of the ship was set in physical ton-kilometers. The total number of ship plans for the period of operation of the line is equal to its planned cargo turnover. This made it possible to combine the interests of the ship collective, the dispatching and destination points of the cargo, and the steamship company as a whole.

A plan of 53 million ton-kilometers was set for each diesel ship of this line; actual performance was 55 million ton-kilometers on the average per ship, with a minimum of 54 million and a maximum of 56 million ton-kilometers. The average turnaround time for the diesel ships on the line was 28 days.

In the 1980 season the planned cargo turnover per ship was raised to 78 million ton-kilometers, and actual turnover reached 79.5 million. The average ship turnaround time on the line was reduced to 23 days. In the 10th Five-Year Plan the line made maximum use of reserves. Crews were constantly finding internal reserves in order to achieve the highest indicators for ship use. During the five years cargo turnover rose 1.4 percent while fleet expenditures decreased 1.6 percent. The efficiency of work of the diesel ships assigned to the line rose three percent. Beginning with the 1981 shipping season a trend has been observed toward a decline in the volume of timber shipment from the region of the West Siberian Steamship Company. Therefore, the cargo turnover of the line decreased 12.1 percent compared to the 1981 level and the need for the fleet declined 13.4 percent. Of this figure, 1.5 resulted from increasing the work efficiency of the diesel ships.

Shipping on the Tomsk—Surgut integrated line began to be developed in the 1973 season. The pioneers were leading captains of the Irtysh Steamship Company: M. P. Listopadov, who is now a winner of the USSR State Prize (OT-2018), A. K. Dolgikh (OT-2021), and N. N. Afanas'yev (OT-2025). The difficulty of developing this line related to the fact that more than 1,000 kilometers of its route was within the territory of the West Siberian

Table 2

	Integrated Lines								
	Omsk—Prokhorkino (Design No 2188)			Tobol'sk-Urengoy (Design No 1743)			Salekhard-Urengoy (Design No R 77)		
	1975	1980	1981	1976	1980	1981	1977	1980	1981
Shipping Volume, thousands of tons	326	330	290	144	177	202	102	130	133
Cargo Turnover, millions of ton-kilometers	644	653	574	387	477	546	106	136	140
Length of Shipment, kilometers	1,975	1,979	1,980	2,687	2,695	2,703	1,036	1,046	1,050
Ship Turnaround, days	23	23	23	21.5	19.8	20	9.1	8.8	8.7
Route Speed, kilometers/days	335	345	350	379	372	375	430	415	420
Running Time, percentage	58	63	63.5	52.4	55.4	56.2	63.7	66.3	67.3
Productivity of Ship Work, ton-kilometers/tonnage-days	216	222.6	226	137.8	141.8	142	123.2	124.2	124.8
Prime Cost of Shipping, kopecks/ 10 ton-kilometers	1.23	1.19	1.18	2.89	2.74	2.68	3.41	3.18	3.16
Productivity of Labor, thousands of ton-kilometers/person-days	35.5	36.4	36.8	34.5	36	36.6	22.0	25.7	26.5

Steamship Company. The Irtysh navigators did not know sailing conditions on this route.

In 1975 the crews of four No 428 diesel ships with trains of four No R56 12,000-ton sections made regular runs on this line. Today seven diesel ships with trains of six barges apiece operate on this line. Despite the 50 percent increase in the weight of the train, traveling speed declined only 2.1 percent and turnaround went down 2.3 percent. Thus, the optimal scheme was found for connecting six sections in a double-line train. Cargo turnover rose 56.9 percent during the five years, while the need for the fleet increased just 50.7 percent.

The Tobol'sk-Urengoy and Salekhard—Urengoy integrated lines began regular operations in 1976 and 1977 as No 1743 diesel freighters and No R77 tankers were delivered. In 1981 cargo turnover on these lines was to rise 41.1 and 32.1 percent respectively, while the need for the fleet would be up 36.9 and 30.3 percent.

The chief directions in improving the work technology of the integrated lines are searching for every possible way to utilize direct and return segments in order to minimize empty runs, reducing ship downtime for all types of processing, and providing the fleet with cargo that makes maximum use of cargo-carrying capacity and space.

The system of ship planning and record-keeping and evaluation of the labor of ship crews in addition to well organized socialist competition are very important for stable ship work on the line. Since the 1978 shipping season the Irtysh Steamship Company has planned the work of the entire transport fleet and recorded and evaluated on the basis of physical ton-kilometers. This has enhanced the role and responsibility of the dispatcher as organizer of the transportation process in a rigorously controlled regime. Deviation from the regime and schedule causes a drop in the indicators not only of the ship crew but also the working indicators of the dispatcher service.

The group method of work began to be introduced on integrated lines with the 1973 season. Ship crews look for internal reserves and adopt a collective group plan which envisions above-plan cargo shipping without additional use of the fleet on the particular line. In 1980 2.355 billion ton-kilomters of cargo turnover was performed by the group method. It will increase 1.5 percent in the 1981 season.

For moral and material stimulation of ship crews working on the integrated lines by the group method, challenge banners and monetary prizes which are awarded to the ship collectives that achieve the best indicators have been established. The results of competition are reviewed monthly at a joint session of the management of the steamship company and the presidium of the basin's fleet committee. An increased bonus is envisioned for fulfillment of the group plan.

Analysis of ship work on the integrated lines shows that the reserves of the assigned fleet are still not being used fully. Certain ships spend 5-6 days above the norm in processing. This downtime occurs most often on the roadsteads of the Tomles and Omskles combines and at the docks of customers in the ports of Nizhnevartovsk, Nefteyugansk, and Urengoy. Ship downtime for navigation and emergency repair has a negative effect on the work indicators of the integrated lines. The turnaround time of certain ships is increased 5-6 percent for these reasons. At the same time, innovative crews reduce planned norms by 10-15 percent and significantly exceed the assignment for cargo turnover. For example, No 758 diesel tugs OTA-901 and OTA-874, which were operated during the 1980 season with trains of two 3,700-ton tanker barges apiece on the Omsk—Salekhard line, had cargo turnover figures of 81.8 and 84.2 million ton-kilometers compared to a plan of 62 million, while the diesel ships OT-801 and OT-837 did only 60.8 and 52.1 million ton-kilometers respectively.

Failure to have ships available at the right time because of delays in repair and removal of ships from the line for various reasons have a particularly negative effect on the efficiency of work of the lines. In 1980, for example, four of the nine steamships came out of winter repair late on the Omsk—Prokhorkino line, and 15 out of 20 were late for the Omsk—Salekhard line. The losses of carrying capacity were 11 and 82 million ton-kilometers respectively. Three ship crews did not fulfill their assignments because they were taken off the planned line.

During preparation for the 1981 shipping season the dispatcher service of the steamship company made a thorough and complete analysis of shortcomings in fleet work and introduced appropriate adjustments in the procedure for the work of the integrated lines envisioned by the 1981 plan.

The plan for operations work and organizational-technical measures was developed with due regard for the new statute "On the Traffic Schedule of the Cargo Transport Fleet." For each group of ships being operated on the integrated lines responsible workers are assigned in the shipping service and the division of petroleum shipping. They give the collectives of ships and ports practical assistance in solving problems in order to raise the efficiency of fleet use.

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OCEAN AND RIVER

ECONOMIC IMPORTANCE OF ARTIC EMPHASIZED

Moscow MOSCOW NEWS in English No 6, 14-21 Feb 82 p 12

[Text] **With every year the "accent" on Siberia is being felt with increasing strength in the Soviet Union's economy.**

The realization in Siberia of programmes of nationwide importance have led to the establishment of its first economic belt, which has taken shape in the south, along the Transsiberian Railway. It accounts for the major share of the industrial output and more than 90 per cent of the area's population.

At the end of the 11th five-year period (1981-1985) the lines will open on the Baikal-Amur Railway, which will pass across the Near North territory. The area of the BAM reclamation zone is comparable in size to Western Europe. Siberia's second economic belt is beginning to take shape there. The full implementation of the BAM Programme will take more than just one decade and is projected into the 21st century.

Stage-by-stage development of the economy of the Soviet Union's eastern regions envisages a further advance northward. To this end investigations are carried out by over 700 research and design organizations, and also by institutes of higher learning.

A special place is held among them by the economic expedition of the Siberian branch of the USSR Academy of Sciences, under the scientific direction of Academician Abel Aganbegyan. The coming summer will be their fourth summer in the polar regions.

An "MN" correspondent interviewed the chief of the expedition, Vladimir KVINT, Cand. Sc. (Econ.).

The North zone occupies nearly half of the territory of the Soviet Union and in area is comparable to the United States," he said. "Today it accounts for half of Soviet oil production, more than a third of our natural gas and timber, and a large share of non-ferrous, rare and precious metal ores. But a great proportion of this comes from the so-called Near North, where the habitat and climate are quite suitable for human life.

"However, it is already clear that we have to advance farther, to the high latitudes. In the opinion of the director of our expedition, Academician Abel Aganbegyan, the development of the Arctic wealth, which depends on navigation along the Northern Sea Route all the year round, is the greatest economic programme for the future. That is why it is so important to lay the scientific foundations for it."

At the mere mention of the Arctic a person with no first-hand knowledge of it tends to feel uncomfortable, to say the least.

Let us be frank: many of those who do know it at first hand feel the same. These are very severe parts. One criterion for checking an area's harshness is the index of climatic severity. In Moscow, for instance, it is 1.9, but on Dickson Island in the Kara Sea it is 7.

One doesn't often hear economists saying that they're actually going on an expedition.

That is true. But though ours is called an economic expedition, its composition is closer to that of those scientific centres which conduct research into global problems affecting the whole of mankind.

Our expedition includes leading Soviet specialists in diverse branches of the economy, geology, ecology, medicine, modern technological systems and agriculture.

Besides which, at different stages of the research we are joined by other scientists, officials of the USSR State Planning Committee, local economic executives, state and Party functionaries.

This enables us to examine the strategic problems in developing the polar regions, and make a comprehensive assessment of both the benefits for the country and what expenditure of resources this will require.

What parts has the expedition visited?

We began by studying the basins of the Yenisei and the Angara. Then we went along the Northern Sea Route and the Pacific coast of the country. This summer we shall head towards the lower reaches of the Irtysh and the Ob. In the future we'll study the economic areas along the Lena, the Northern Dvina and the Pechora.

The Northern Sea Route was certainly the most difficult and the most important one. That expedition lasted nearly two months. Our ships travelled 4,100 miles. We flew 11,000 km in planes and helicopters, visiting nearly 60 centres of population and studying the work of more than 20 enterprises and organizations.

There is an axiom that fits the situation in Siberia perfectly: "natural wealth is within the reach of those who have reduced distances".

In the area beyond the polar circle this demand is even more rigid. Transport expenditures here amount to 60-70 per cent of all the costs.

Navigation in the Arctic Ocean throughout the year has become the key to the real discovery of the Arctic. The Soviet Union possesses the world's largest fleet of marine icebreakers. There are about 25 of them, including three nuclear-powered vessels. But even they are already finding it hard to cope with the increasing number of assignments. There is a need for more icebreakers of different classes, as well as for specialized transport ships. It is also necessary to develop port facilities. Shipments along the Northern Sea Route can even now compete with other kinds of cargo transportation. Despite the considerable transport expenses, northern products prove highly valuable, provided their production is properly organized. The nickel and copper of Norilsk, for instance, are the cheapest in the country.

Work is under way to increase the navigability of the Siberian rivers. Railway tracks and pipelines are being extended into the Far North. The air fleet there is waiting for dirigibles and similar items. There is a bad need for transport vehicles that can negotiate any sort of terrain.

Doesn't this, in turn, form part of another problem: creating special machinery and technology for the North?

Indeed, the regional technical policy determines many things here. Any kind of work in the Arctic is at least three times more expensive. Losses caused by the inadaptability of the machinery to the harsh conditions exceed its initial cost between three and seven times. On the other hand, one rouble of additional expenses for manufacturing machines in a northern variant saves 7-8 roubles on their operation.

Adaptability, however, is only part of the regional technical policy. The main thing, putting it in the classical language of economics, is the correlation between live and materialized labour. We need to achieve maximum productivity with the minimum number of workers. This is done, for example, by using the prefab method in construction, widely applied when developing oil and gas deposits in Western Siberia. Industrial and other installations of any type are assembled from units which have already been "stuffed" with all necessary outfits at the factories.

About 40 organizations deal with developing technology for the North. So far demand is ahead of supply. However, it can be hoped that this problem will be gradually resolved, although for complexity it is similar to designing space systems. For instance, the working parts of the extracting mechanisms, used in the underwater tin mine on the shelf of the Laptev Sea, had to be created on the principles of bionics.

What will bring life into the future enterprises and towns beyond the polar circle?

The North is by no means short of energy resources. The whole of the Arctic is highly promising as far as oil and gas are concerned, and its coal and hydropower reserves are large. Most of the methods for obtaining energy are already being utilized there. There are atomic, tidal and geothermal power plants, and plans are under way to use wind power.

Could you say a few words about the ecological aspect of the situation?

Today we do not always realize the meaning of environmental protection for the Far North. Nature is easily injured there. Even the reindeer, that embodiment of the tundra, can inflict tangible damage on it unless pasturage rules are observed. The ecosystem of our planet cannot be conceived without the Arctic, which is why the actual task must be to reduce to the minimum any harm inflicted on its nature.

To all appearances, the old notion that we shall go to the Arctic only to work is being reconsidered, isn't it?

Indeed, the strategy of shift and site development is gradually losing ground. The rapid growth of the prices of raw materials and fuel everywhere inclines us to the trend of extracting and processing everything we can from beneath the Earth's surface, wholly and utterly. This is only possible provided large territorial-industrial complexes are formed, in which enterprises of different branches make up a consecutive technological chain. In this case the expenses are cut by 10-15 per cent and the social issues are easier to solve.

On the whole, the projected Arktika Programme considerably surpasses the BAM Programme in volume of work and investment. Five large territorial-industrial complexes are already discernible in the Far North: the Timano-Pechorsky, North Ob, North Krasnoyarsk, North Yakutsk and Chukotsky complexes. They will include dozens of production enterprises. And as we know, leading enterprises in the east of the country each have a capacity as great, and often greater, than do entire industries in developed West European countries. For instance the mining-and-smelting combine in Norilsk, or the Angara hydro cascade in the Near North, or the aluminium works in Bratsk.

Who is to implement the Arktika programme?

During Soviet years the population of the North has increased sixfold. However, on the scale of the whole country its share amounts to a mere 3 per cent. As to the Arctic, its population is about two million.

The high latitudes have always attracted enthusiasts. And enthusiasts are still there. But let us be objective: such spiritual elan is, as a rule, of a short duration and quickly comes into conflict with reality.

Today we know something about the human organism's capability to adjust to life in the North. Firstly, not everyone, not even if he is a perfectly healthy person, can adapt himself to the Arctic. Some people can live there for years, others only for months. Secondly, northerners are in special need of a well-thought-out recreation system.

How can the impact of the severe climate be alleviated?

First and foremost, by the provision of comfortable conditions for living. An example of this is Norilsk, on the 69th parallel. In the past ten years its population has grown by 80,000—to the present 240,000 plus. For the level of public services and amenities Norilsk is in no way inferior to any of the best cities on the planet.

Big problems will also have to be solved in the field of labour in the North. There is a need for professional selection. Working schedules must be determined and controlled by medical personnel, with special attention to disease prevention.

All this is being done in Norilsk. Along with the economic five-year plan, there is also a health five-year plan there. The time is approaching when data on the state of health of every inhabitant of the city will be fed into a computer, and it will be possible to control man's health from day to day.

Interviewed by
Georgi BOGDANOVSKY

CSO: 1812/52

IMPORTANCE OF VARIOUS EFFICIENCY FACTORS IN RIVER FLEET OPERATION REVIEWED

Moscow RECHNOY TRANSPORT in Russian No 10, Oct 81 pp 7-9

[Article by A. Barakin, Main Administration of Shipping and Fleet Operations of the Ministry of the River Fleet: "Use of the Cargo Fleet: A Survey"]

[Text] The productivity of the cargo fleet in the 10th Five-Year Plan rose by 3.6 percent for the sector as a whole, which was responsible for 32 percent of the total growth in cargo turnover of river shipping. At the same time, the level of gross productivity established by the 1980 plan was not met for any type of cargo vessel, and the use of tankers was even worse than in 1975. Losses of carrying capacity because of failure to fulfill plan indicators for fleet work were 9.3 billion ton-kilometers.

The use of the fleet can be evaluated more objectively on the basis of factor analysis of the productivity of the cargo fleet as a whole, because the level of this indicator (for particular forms of the fleet) is significantly influenced by annual reassignment of self-propelled and non-self-propelled tonnage to different work sectors and types of cargo and by changes in the forms of traction service to non-self-propelled vessels resulting from the actual availability of non-self-propelled and push-pull vessels.

Table 1 below shows performance of the assignments of the 10th Five-Year Plan for raising overall productivity of the cargo fleet by steamship companies and the influence of the principal factors on change in this productivity compared to results achieved in 1975.

In 1980 the Bel'skoye, Northern, Sukhona, and Western companies successfully managed their plan indicators. The Volga Tanker, Volga Unified, Moscow, Kama, Vyatka, Volga-Don, Northwestern, White Sea-Onega, Pechora, Irtysh, West Siberian, and Lena Unified steamship companies raised productivity in comparison with 1975, but did not meet their plan assignments.

The use of the cargo fleet was worse and its productivity declined even in comparison with the level achieved at the end of the 9th Five-Year Plan for the Kuban' (85 percent), Yenisey (91.6 percent), East Siberian (90.2 percent), and Amur (94.4 percent) steamship companies.

Table 1

Steamship Company	Изменение (a) производительности, к 1975 г., %		Factors Accounting for Change						
	1980 Plan	1980 Actual	Loading	дальности перевозок (b)	Empty Runs	Route Speed	коэффициента переработки грузов (c)	интенсивности грузовых работ (d)	времени прочих стоянок (e)
«Волготанкер» (1)	13,1	4	5,6	−3,9	−0,9	5,1	—	1	−2,9
Волжское объединенное (2)	8,2	1,4	7,8	−6,5	−0,7	0,3	1,1	1	−1,6
Московское (3)	17,8	15	4,3	−6	2,1	0,3	0,8	3,8	9,1
Камское (4)	5,6	1,9	12,3	−25	1,6	1,6	0,9	3	7,5
Вятское (5)	36,5	35,3	21,6	−10,8	1,1	0,7	−0,2	2,1	20,8
Бельское (6)	25,9	56,1	−6,7	10,2	1	5,9	−0,2	13,2	32,7
Волго-Донское (7)	10,7	0,3	3,6	−2,6	0,4	0,4	−0,4	−0,6	−0,5
Кубанское (8)	25,5	−15	15,2	−42,2	1,6	3,6	—	−1,1	7,9
Северное (9)	12,5	25,5	11,8	4,5	0,7	0,8	−0,1	−0,8	8,6
Сухонское (10)	13	19,2	7,6	3,5	0,7	1,9	−0,8	2,2	11,1
Северо-Западное (11)	26,2	16,4	6,9	1,3	1,3	1,7	0,3	3,1	1,1
Беломорско-Онежское (12)	10,2	3,9	4,7	−3	0,9	0,8	0,3	1,2	−1
Печорское (13)	30,9	16,3	4,5	1,2	−1,3	0,3	−0,1	6,1	5,9
Западное (14)	3,1	7,3	4	8,3	−2,9	—	0,6	−2,2	−0,5
Иртышское (15)	2,4	0,9	3,1	−15,1	2,6	−1,1	2,1	1,9	7,1
Западно-Сибирское (16)	16,1	15,1	0,3	−1,1	—	0,9	3,2	11,1	1,3
Енисейское (17)	−8,8	−8,4	−1,5	−16,3	4	−2,2	—	5,5	2,1
Восточно-Сибирское (18)	4,1	−9,8	7,8	−10,3	0,3	1,4	—	6,1	0,2
Амурское (19)	9,4	−5,6	3,9	−13,7	6,3	−0,9	−1,2	3,7	1,1
Ленское объединенное (20)	10,9	7,3	2	−6,4	1,8	−0,4	−0,5	4,3	6,5
Total for Ministry of River Fleet	8,8	3,6	4	5,3	0,8	0,1	0,2	2,8	2

Key:
(a) Change in Productivity, as percentage of 1975;
(b) Distance of Shipments;
(c) Coefficient of Cargo processing:
(d) Intensity of Cargo Handling Work;
(e) Other Downtime;

(1)	Volga Tanker;	(8)	Kuban';	(15)	Irtysh;
(2)	Volga Unified;	(9)	Northern;	(16)	West Siberian;
(3)	Moscow;	(10)	Sukhona;	(17)	Yenisey;
(4)	Kama;	(11)	Northwestern;	(18)	East Siberian;
(5)	Vyatka	(12)	White Sea-Onega;	(19)	Amur;
(6)	Bel'skoye;	(13)	Pechora;	(20)	Lena Unified.
(7)	Volga-Don;	(14)	Western;		

The results of analysis testify to serious shortcomings in the organization of fleet work and in the shaping of cargo flows in a number of steamship companies.

During the 10th Five-Year Plan most of the steamship companies improved the loading of ships, and in the sector as a whole it rose three percent. At the same time, guaranteed depths were not provided in certain basins and the steamship lines did not make full use of opportunities to increase ship loading during the deep-water periods of the shipping season and violated cargo loading procedures. As a result, ship loading compared to 1975 was worse for the Bel'skoye (89.5 percent), West Siberian (99.6 percent), Yenisey (98.1 percent), East Siberian (90.2 percent), and Amur (95.3 percent) steamship companies. This in turn lowered the carrying capacity of the cargo fleet by 500 million ton-kilometers.

The launching of the Cheboksary Hydroelectric Power Plant on the Volga, which will eliminate the graduation of depths in the Gor'kiy—Gorodets segment and successful performance by the basin route administrations of the program to increase guaranteed depths on the rivers of West Siberia, the Far East, and other river basins are creating conditions for a further increase in the loading of the cargo fleet during the 11th Five-Year Plan.

The dispatcher service, port workers, and the crews of ships should insure rigorous compliance with established procedures for loading ships calculated to make full use of the cargo-carrying capacity and space of the ships under conditions of constantly changing depths on waterways during the navigation season. In this connection, there should be a significant improvement in services to forecast changes in ship travel dimensions and to provide loading ports and navigators with information on expected depths and the possibilities of loading ships to the maximum possible draft.

Calculations show that increasing guaranteed depths on a number of rivers and careful daily work to improve the use of ship cargo-carrying capacity on each trip will make it possible to increase ship loading by 2-3 percent in the 11th Five-Year Plan.

The average length of cargo shipment, which has shown a tendency to decline in recent years, has a significant effect on the gross productivity of the fleet. For ship conveyance by destination in 1980 it was 497 kilometers (compared to 544 kilometers in 1975) and by fleet work it was 441 kilometers (483 kilometers in 1975), in other words it declined in both cases by 8.7 percent. As a result of this, the productivity of the cargo fleet for the Ministry of the River Fleet as a whole declined by 5.3 percent. Considering that the five-year plan envisioned the average length of ship conveyance by destination to remain at the 1975 level, the losses of fleet carrying capacity through this decline were 12.5 billion ton-kilometers. Only Bel'skoye, Northern, Pechora, and Western steamship companies were able to increase the average length of ship conveyances; for the other companies the lengths declined significantly.

Work done to find cargoes for loading ships in the empty direction made it possible to reduce the empty run in an average cycle from 250 to 237 kilometers, which was helpful in raising the carrying capacity of the cargo fleet. But in the Volga Tanker, Volga Unified, Pechora, and Western steamship lines empty runs increased, which lowered the carrying capacity of the fleet for these companies by 800 million ton-kilometers.

The 11th Five-Year Plan envisions a two percent increase in the average length of ship conveyances for the sector as a whole. The employees of the planning divisions and cargo and commercial services of the steamship lines should take necessary steps to insure the planned average length of conveyances and a continued reduction in empty runs by ships. Vigorous work with cargo shippers and receivers is necessary to switch long-distance cargo flows from rail to river transport. The Economic Planning Administration and the Main Cargo Administration of the Ministry of the River Fleet, as well as the planning and scientific research institutes of water transportation should help the steamship companies in this large and important job.

The route speed of cargo ships for the ministry as a whole rose just 0.2 percent in comparison with 1975, which had an insignificant impact on increase in the carrying capacity of the fleet. Owing to shortcomings in technical operation of ships, their traveling speed declined in the Irtysh, Yenisey, Amur, and Lena Unified steamship companies (the losses of cargo turnover for this reason were 500 million ton-kilometers).

Employees of the steamship company ship operations services, the repair-operations depots of the fleet and shipyards, and ship mechanics should draw the appropriate conclusions from these results and take essential steps to eliminate the factors that led to a decline in the traveling speed of the ships, while navigating personnel must make more effective use of route conditions and progressive know-how to increase ship traveling speed.

A further reduction in ship downtown in port and en route is a major reserve for raising the work productivity of the cargo fleet.

Ships spend a great deal of time for cargo handling. In 1980 each ship spent an average of 22 hours for loading and unloading, which was 33.2 percent of all anchor time. In comparison with 1975, downtime for cargo handling was reduced by 3.8 hours or 15 percent. This was accomplished mainly by increasing the intensity of cargo-handling work, which was 2.069 tons per tonnage-day as compared to 1.737 in 1975. In other words it rose by 19.1 percent.

In the 10th Five-Year Plan all the steamship companies increased the intensity of cargo-handling work with the exception of Western company where this figure declined by 3.7 percent. At the same time, it must be observed that the rates of growth, both in intensity of cargo-handling in the Volga Tanker, Volga Unified, Volga-Don, Kuban', Northern, White Sea-Onega, and Irtysh steamship companies were much lower than the average for the Ministry of the River Fleet, which had a negative effect on fulfillment of assignments for raising the productivity of the cargo fleet.

If the intensity of cargo-handling work in these steamship companies were raised to the level achieved on the average for the ministry, it would be possible to perform an additional 2.4 billion ton-kilometers of cargo turnover.

The decree of the CPSU Central Committee and USSR Council of Ministers entitled "Steps Toward the Development of River Transportation in 1981-1985" establishes the assignments of raising the intensity of cargo-handling work by an average of 16 percent during the five years and reducing ship downtime in ports of the ministry of the River Fleet by 15 percent.

To carry out these assignments the steamship companies must take organizational-technical steps to equip the docks with highly productive loading and unloading machinery, improve the use of existing port equipment with respect to productivity, increase the number of work shifts, streamline procedures for loading work and the work of consolidated, multifaceted brigades of port workers, and continue introducing the hydraulic method of processing mineral building materials.

Significant reserves for improving the use of the cargo fleet can be found by reducing downtime for technical and procedural operations. In 1980 when the total average turnaround time for shifts of the Ministry of the River Fleet was 121 hours, this downtime accounted for 44 hours. This included 16 hours spent waiting for loading work, 10 hours forming the train of vessels and waiting for propulsion, and 18 hours for technical operations in the port and en route. In comparison with 1975 downtime not related to load processing was reduced by 5.6 percent. Table 2 below shows the figures for this downtime by steamship companies. In the table time expenditures waiting for propulsion are given relative to the entire cargo fleet.

At the same time, compared to 1975 downtime for technical and procedural operations in the average turnaround increased for the following steamship companies: Volga Tanker, by 10.7 percent; Volga Unified, by 5.5 percent; Volga-Don, by 1.5 percent; White Sea-Onega, by 2.6 percent, and Western, by 1.3 percent. The increase in downtime for these reasons in these steamships companies led to a loss of fleet carrying capacity of 2.1 billion ton-kilometers. Moreover, downtime waiting for loading work increased or remained at the 1975 level in the Kuban', Irtysh, East Siberian, and Amur companies, while downtime waiting for formation of the train and for propulsion increased or stayed the same in the Northern and Yenisey companies and downtime for technical reasons increased or remained at the 1975 level in the Kama, Vyatka, Sukhona, Northwestern, and East Siberian companies. This also had a negative effect on performance of assignments to raise productivity of the cargo transport fleet.

The collectives of the operations services of the steamship companies and ports must direct the efforts and activity of the employees of other subdivisions of river transportation related to ship service and organizing ship use to further streamlining the work of the fleet according to the traffic schedule and improving comprehensive shore service to ships in port and en route. They must introduce progressive methods of labor in the fleet and at shore enterprises more broadly in order to substantially reduce downtime for all reasons related to average turnaround time.

Factor analysis of the work of the fleet in the 10th Five-Year Plan shows that the steamship companies have reserves for a further increase in the productivity of self-propelled and non-self-propelled ships. These reserves must be fully utilized.

Table 2

Steamship Companies	(a) Время стоянок в среднем обороте, кроме грузовых работ, ч		Included in Figures of Column (a)					
			(b) по техническим причинам		(c) в ожидании грузовых работ		(d) в ожидании формирования составов и тяги	
	1975 г.	1980 г.	1975 г.	1980 г.	1975 г.	1980 г.	1975 г.	1980 г.
«Волготанкер» (1)	55	61	32	42	16	16	7	3
Волжское объединенное (2)	40	42	15	17	13	14	12	11
Московское (3)	23	19	9	8	8	6	6	5
Камское (4)	26	21	9	9	11	7	6	5
Вятское (5)	39	27	2	2	21	15	12	10
Бельское (6)	28	14	4	2	14	7	10	5
Волго-Донское (7)	44	44	22	21	15	16	7	4
Кубанское (8)	9	7	3	2	2	2	4	3
Северное (9)	25	22	8	6	9	8	8	8
Сухонское (10)	67	56	14	14	28	22	25	20
Северо-Западное (11)	40	36	20	20	12	11	8	5
Беломорско-Онежское (12)	66	68	28	33	29	27	9	8
Печорское (13)	59	53	6	5	32	28	21	20
Западное (14)	33	84	15	17	16	15	2	2
Иртышское (15)	82	64	24	19	22	23	36	22
Западно-Сибирское (16)	56	49	5	4	30	27	21	18
Енисейское (17)	78	73	17	14	37	28	24	31
Восточно-Сибирское (18)	18	18	4	5	6	6	8	7
Амурское (19)	32	28	8	7	13	14	11	7
Ленское объединенное (20)	83	67	35	30	34	26	14	11
Total for Ministry of River Fleet	47	44	18	18	17	16	12	10

Key:
(a) Downtime in Average Cycle Excluding Loading Work, hours;
(b) For Technical Reasons;
(c) Waiting for Loading Work;
(d) Waiting for Formation of Trains and Propulsion;

(1)	Volga Tanker;	(8)	Kuban';	(15)	Irtysh;
(2)	Volga Unified;	(9)	Northern;	(16)	West Siberian;
(3)	Moscow;	(10)	Sukhona;	(17)	Yenisey;
(4)	Kama;	(11)	Northwestern;	(18)	East Siberian;
(5)	Vyatka	(12)	White Sea-Onega;	(19)	Amur;
(6)	Bel'skoye;	(13)	Pechora;	(20)	Lena Unified.
(7)	Volga-Don;	(14)	Western;		

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OCEAN AND RIVER

LACK OF CONTAINERS, SHORE EQUIPMENT FOR PRODUCE SHIPPING FROM ASTRAKHAN REVIEWED

Moscow RECHNOY TRANSPORT in Russian No 10, Oct 81 pp 9-10

[Article by N. Mokrousov, deputy chief of cargo and commercial operations of the Port of Astrakhan": "Container Shipment of Vegetables and Melons"]

[Text] The amount of produce shipped by river transportation from Astrakhanskaya Oblast is increasing every year. Shipments rose from 127,000 tons in 1975 to 224,000 tons in 1980. By 1985 the volume of river shipments of tomatoes and watermelons from points on the Lower Volga should reach 420,000 tons.

In addition to increasing shipping volume, it is essential to insure good quality in the produce being shipped.

Working experience shows that container shipping preserves high quality produce.

In addition to improving preservation and quality, container shipping of watermelons and tomatoes in river vessels has numerous other advantages over shipping watermelons in bulk and tomatoes in boxes: expenditures of manual labor for loading work are reduced by two-thirds to three-fourths, ship downtime for cargo processing is decreased, and the amount of cargo that the ship can carry without detriment to the quality of the produce increases. In addition, the owners of the produce do not have to pay for guards.

Unfortunately, in the 1980 shipping season only 42,400 tons of watermelons were shipped in containers. This was 58.6 percent of the total volume of this shipping.

A joint order of four RSFSR ministries (trade, agriculture, motor vehicle transportation, and river fleet) and the RSFSR Union of Consumer Societies in 1980 gave the Astrakhanskaya Oblast Fishing Consumer Society and the Ovoshcheprom [Vegetable Industry] Trust the assignment of shipping 50,000 tons of watermelons in containers. But this assignment was only 84.8 percent fulfilled.

Only eight of the 14 shipping points ship watermelons in containers. And just two points, Olya and Biryuchki, had reinforced concrete docks and cranes on shore, while the other six loaded ships from the natural bank.

The managers of the oblast fishing consumer society, the Ovoshcheprom Trust, and the administration of agriculture did not take steps to prepare and organize container shipping from seven points: Travinskiy, Volzhskiy, Semibugorinskiy, Yenotayevskiy, Seroglazka, Zavolzh'ye, and Bakhtemir. The reason for this situation is that the RSFSR Union of Consumer Societies, the RSFSR Ministry of Trade, and the Ministry of Agriculture are moving very slowly to implement container shipping of tomatoes.

For several years cargo owners have been obliged, under a resolution of an interdepartmental conference, to make test shipments of tomatoes in TKB-90-U containers. But for some unknown reason, these containers are being delivered to the Limanskiy Rayon procurement office which does not ship tomatoes by water.

The lack of specialized docks is an equally important obstacle to organizing container shipment of produce. Until 1979 only Olya, of all the 44 shipping points, had a good reinforced concrete dock and cranes. In 1980 two more docks were built, at Biryuchki and Bakhtemir, but only the former was used. All shipping in Bakhtemir was done from the old wooden dock.

The Zavolzh'ye dock was accepted from construction workers in the fourth quarter of 1980. Thus, at the present time the system of the oblast fishing consumer society has four equipped docks, while the system of the oblast administration of agriculture and the Ovoshcheprom Trust has no docks at all that meet current requirements. In the fourth quarter of 1980 construction was begun on a reinforced concrete dock at Kilinchinskiy, but plans do not envision launching it in operation in 1981.

The Ministry of Agriculture and the RSFSR Union of Consumer Society must build 10 mechanized docks with container areas for loading watermelons and tomatoes into river ships in 1980-1985 and put them into operation. At present only one has been built, in Zavolzh'ye. Construction at two other points has not begun yet, nor is it envisioned by the 1981 plan.

Cargo shippers consider diesel ships with load capacities of 600-700 tons most suitable for shipping produce. With good organization of labor 280-350 tons of produce is loaded into these ships during the daylight hours of one day (the ship-hour norm for loading tomatoes in boxes is 19 tons an hour and the time norm for loading 280 tons is 14.7 hours).

Each year these ships, which number about 140, make 430-450 trips during which they carry 105,000-120,000 tons. The remainder (100,000 tons) is shipped in diesel ships with load capacities of 200,000 tons, 950-ton barges, diesel catamarans with load capacities of 1,000 tons, and other ships.

The number of diesel ships with load capacities of 600-700 tons used for shipping is remaining constant at present, but it is an old fleet and will have to be withdrawn from use and written off in the near future. The increase in shipping volume is accomplished by using ships with large load capacities. It is very difficult to load large-capacity ships at existing docks, and for this reason cargo shippers refuse to accept them. When shipping is organized in containers and well-equipped mechanized docks are available, loading large ships will not present difficulties. Furthermore, delivery speed in the ships is much better, and the load is preserved well in them.

The number of containers belonging to the RSFSR Ministry of Trade today does not permit a significant increase in shipping volume. At least 800,000 containers will be needed in 1985 for container shipment of 420,000 tons of tomatoes and watermelons, but in 1980 only 87,000 were in use.

The main steps to solving the problem of increasing the shipment of this produce and improving its preservation are increasing the stock of produce containers and construction of container areas and mechanized docks by the interested ministries and departments.

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OCEAN AND RIVER

NEW ARRANGEMENT OF TRAINS OF VESSELS NEEDED IN VOLGA BASIN

Moscow VODNYY TRANSPORT in Russian 21 Jan 82 p 2

[Article by B. Nikitenko, senior scientific associate, Central Scientific Research Institute of Economics and Operation of Water Transportation: "The Economy Must Be Economical — We Need Integrated Trains of Vessels"]

[Text] Domestic and foreign experience shows that the development of shipping in large-capacity trains propelled by pushboats on internal waterways is one of the most progressive and highly economical ways to organize transportation work.

Therefore, it is not accidental that more than half of the cargo turnover of the West Siberian Steamship Company, for example, is done in so-called double-line trains with 12,000 tons capacity; in the Irtysh Steamship Company they have capacities of about 17,000 tons. It is complex and difficult to operate these trains, but they are economically advantageous and the Siberian steamship companies are doing everything possible to increase shipping in them.

The situation in the Volga Basin is different. Although double-line sectioned trains (load capacities of 15,000 tons apiece) are 15-20 percent more economical than single-line trains, for a number of reasons it is much more difficult to use them on the Volga. Frequently they must spend long times (up to 10 days) stopped en route waiting for better weather, and then they arrive in port in clusters and, of course, have to wait for service. Whereas single-line trains can be operated in waves up to two meters high, because of the deep wedge-shaped hollow between the stems double-line trains have a restriction of 1.5 meters.

The increase in the number of double-line trains has noticeably retarded the working rhythm of other ships on the Volga. For this reason many workers have developed a negative attitude toward the use of double-line trains there, whereas on Siberian rivers which do not have reservoirs there is no such problem.

In the article "Use Sectioned Trains Better" (VODNYY TRANSPORT, 12 March 1981), K. Lyakhov directly proposes that we stop using 15-ton double-line four-section trains on the Volga and return to the use of two-section trains of 7,500 tons, as was done seven years ago. This step would inevitably cause a significant drop in the productivity of labor and lead to significant additional expenditures of fuel per unit of transportation work.

What Should Be Done?

In the Volga-Kama basin we should look for new technical concepts that will substantially raise the reliability of double-line sectioned trains, and not reject this more progressive type of shipping.

The Kama Steamship Line has used double-line sectioned trains for a long time. They believe that it is necessary to have in front of such trains (according to the dimensions of the lock) a load shaping vessel [attachment, "pristavka"] on automatic couplings. With its stern end in the wedge-shaped hollow between the lead sections, it would give the entire train a more streamlined, integrated shape. The speed of such an integrated train, formed of five vessels, increases 1-2 kilometers an hour with the same pushboat power, and this is confirmed by modeling tests made by doctor of technical sciences M. Alfer'yev in the experimental tank at GIIVT [Gor'kiy Institute of Water Transportation Engineers]. This eliminates flooding of the holds of the lead sections, and such trains of vessels could be operated in waves of up to two meters, just like single-line trains.

Leading captains, in particular Hero of Socialist Labor L. Pushkarev, piloted such trains, in the shape of a wedge or steelyard, in the early days of navigation on the first Volga reservoirs. They put an additional vessel in front of the double-line train and received very good results.

It is also very important that drop rudders that do not require a special power plant be mounted on the bows of the forming vessel. This significantly improves the controllability of long trains in strong winds.

In view of the critical situation that has come about with the development of large trains in the Volga-Kama Basin, TsNIIEVT [Central Scientific Research Institute of Economics and Operation of Water Transportation] has submitted several proposals to the Technical Administration of the Ministry of the River Fleet concerning the need to begin designing an experimental integrated train of design 1787 series-produced sections and a load forming attached vessel, such that the train could go through the lock without reforming. It would be wise to set up a series of modeling tests in a large experimental tank for the purpose of determining the minimum dimensions of the attached vessel. At present, however, things have not gone beyond exchange of correspondence.

But this is a problem whose solution cannot be postponed. The time is approaching for major overhaul of the primary and most economical tonnage in the central basin. We are referring to the 176 design 1787 series-produced section whose total tonnage is 650,000 tons. The work should be done with due consideration for the possibility of using those most economical sections in integrated trains, which promises a significant economic impact.

Calculations made by TsNIIEVT show that the use of the load-forming attached vessel is profitable when its construction cost is less than 300,000 rubles. Three integrated trains with load capacities of 17,000 tons apiece composed of design 1787 reinforced sections with load-forming attached vessels can do the work of four of the double-line 15,000-ton trains presently being used. The annual economic impact calculated for 44 integrated trains, which could be formed from the existing sections, would exceed 2.6 million rubles, including a fuel savings of more than 130,000 rubles. This circumstance is especially important because in 1980 alone RSFSR river workers used 35,000 tons of standard fuel more than called for planned norms.

More than five years ago the Kama and Moscow steamship companies, TsNIIEVT, NIIVT [Novosibirsk Institute of Water Transportation Engineers], and GTsK B [State Central Design Bureau] called for the formation of integrated trains, while the Volga Unified Steamship Company, GIIVT, and TsTKB [Central Technical Design Bureau] opposed the idea. The reason for the negative attitude toward integrated trains is in part the wish of leading organizations not to take on additional concerns, a desire to fulfill the plan at any cost, and apparently, the misgivings of TsTKB concerning some of its unsuccessful (to put it mildly) ship designs.

At the present time four (!) different types of series-produced vessels with load capacities between 3,750 and 4,500 tons are used to form large trains in the Volga-Kama Basin (designs 1787, R-79, 1787u, and R-156). None of these classes of ships is optimal, which has a negative effect on the use of lock dimensions, speeding up the delivery of cargo, and the expenditure of metal in fleet construction.

In view of the growing difficulties in transportation work, it is important to begin building standardized sections as soon as possible. The design for them was developed as long ago as 1965. Unfortunately, it is not being used in the optimal variation, and it is only used on Volga-Don class trains of vessels. But standardization of sections is a highly progressive step in ship building! It will enable us to solve a number of major and critical transportation questions because some of the standardized sections could be used efficiently in large trains on the rivers while others, in a sea-going version with hatch lids, could be used on river-sea lines. And it is very important that they could pass the bridges in the Leningrad and Rostov regions without being broken up. This is highly significant because already today the bridges are substantially retarding cargo shipment in self-propelled vessels with high towers. Furthermore, on the Neva, for example, they already have pushboats with low towers for piloting sections under the bridges.

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OCEAN AND RIVER

INADEQUACY OF APPROPRIATIONS FOR PORT DEVELOPMENT IN FAR EAST REVIEWED

Moscow VODNYY TRANSPORT in Russian 1 Dec 81 p 2

[Article: "Ships Need Docks"]

[Text] There have been significant changes in port facilities during the last two five-year plans. The first phase of the Eastern Port with four modern cargo-handling complexes has been built. New dock structures have been put into operation in Vanino, Vladivostok, Magadan and Nakhodka.

But according to calculations by employees at the Dal'morniiproyekt [Far Eastern Maritime Scientific Research and Design Institute], in 1980 there was at all times 1.5-2 million tons more of cargo than dock facilities could handle, and, therefore, the need for capital investment for port construction in the 11th Five-Year Plan is twice the amount of capital appropriated according to the latest ceiling on construction and installation work.

In practical terms, this capital will make it possible for the Port of Vladivostok to complete reconstruction of the dock for processing container cargo and to build a depot for receiving and servicing lighters plus a processing complex to process perishable goods.

At the Eastern Port the capital will make it possible to construct a dock for receiving heavy and very long cargo and machinery, a complex to process large containers, and a complex capable of processing 2.5 million tons of grain (work to be done on share principles by the Ministry of the Maritime Fleet and the Ministry of Procurement).

The already established limitation on capital investment will make it impossible to build essential processing complexes in other ports of the basin. For example, old docks 11 and 12 in Vladivostok will not be reconstructed to take ro-ro ships, and the Port of Nakhodka will not build three new docks to handle general cargo. Badly needed warehouse facilities will not be built.

There is no question that building new specialized processing complexes, rebuilding existing ones, and replacing processing equipment with more productive equipment will make it possible to resolve many problems of handling the planned cargo flow at ports of the Far East, but by no means will all problems be solved. Some of them need special attention.

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OCEAN AND RIVER

PORT OF NOVOROSSIYSK CONTINUES EXCELLENT OVERALL WORK

Moscow VODNYY TRANSPORT in Russian 26 Nov 81 p 1

[Article by Yu. Lukasik and S. Mikhalev, Novorossiysk: "An Intensive Rhythm"]

[Text] Work never stops, day or night, in the Novorossiysk commercial seaport. Ships come and go while cranes and lift trucks are in constant operation; an intensive labor rhythm can be felt everywhere. The collective is successfully meeting its socialist obligations for 1981. Since the start of the year they have processed thousands of tons of national economic cargo beyond the plan assignment; this is several times greater than the outlined indicators. They have received a great deal of above-plan profit from all forms of activity.

"The volume of processing of import cargo," says deputy port chief V. Zakharchenko, "is up almost 50 percent over the same period of last year. And the volume of loose cargo arriving has risen significantly, whereas the port formerly did not handle it. Labor-intensive packaged and single-item cargo coming in has doubled. More than 90 percent of all output is shipped by the direct plan."

How are the port workers able to handle the increased volume of cargo? They are accomplishing this chiefly thanks to precise utilization and refinement of the practices of the Leningrad transportation center. Specifically, a great deal of work was done to improve exchange of information between related systems concerning the delivery of means of transportation and cargo. Daily analysis of joint operations made it possible to improve the search for additional reserves. Furthermore, successful performance has been facilitated by cooperative use of shunting equipment, additional development of the track system, and improvement in shift and daily planning.

Another factor that helps them handle an increased cargo volume is the introduction of the all-weather complex for transshipping loose cargo. It can be used in alternating modes to unload by grapples or by pneumatic lines. In rainy weather, for example, when it is impossible to work with the hatches open, the pneumatic machines are used. Although their productivity is lower, unloading does continue and as a result ship processing time is significantly reduced.

And of course, leading brigades of dock equipment operators such as V. Gorpiychenko, I. Lobodenko, A. Krut'ko, and V. Fal'ko are very important in successful fulfillment of socialist obligations. Month after month the production leaders score high indicators in transshipping cargo. These brigades constantly fulfill shift output norms by 120-130 percent. Socialist competition goes on among the brigades and promotes an increase in labor productivity. The dock workers follow a sliding schedule, making use of every working minute to reduce ship downtime for processing. Since the start of the year the port has saved 6,800 ship-hours. If these hours are converted to days, the gain from early processing would enable a standard ship to haul cargo for 290 days.

The port is handling passenger traffic well. This indicator is constantly rising. Since the start of the year 110,000 passengers above the plan have been carried. This has been accomplished chiefly by broadening contacts with excursion bureaus in Anapa, Novorossiysk, Gelendzhik and Kabardinka.

But not all the indicators of fulfillment of obligations are on an equally high level. The assignment for processing cargo by the mechanized complex method was underfulfilled by 1.9 percent. This remains the weak link in port work; a great deal of manual labor is still employed.

"The assortment of cargo arriving in our port has changed this year," continues V. Zakharchenko. "It is hard to mechanize the process of transshipping new types of cargo, especially in a short time. Moreover, the number of labor-intensive loads has risen. This is what led to failure to fulfill this point in our obligations. But we hope that by the end of the year we will fulfill this indicator."

Labor competition to greet the 60th anniversary of the USSR in a worthy fashion has now developed widely in the port. There is no doubt that it will help the collective of the Port of Novorossiysk, the initiator of all-Union socialist competition, to meet its lofty socialist obligations successfully.

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CONVEYOR BELT AT LENINGRAD QUAY

Moscow MOSCOW NEWS in English No 4, 31 Jan-7 Feb 82 p 8

[Article by Yuri Shnitnikov]

[Text] Captains of merchant ships often point out a paradox: the rapid growth of the number of vessels, and their growing tonnage and speeds are becoming meaningless because the shore services cannot handle the huge volume of cargoes. Waiting in line at the quay and remoorage often takes more time than crossing the ocean.

How to increase the capacity of the ports? This question faced all the workers of the Leningrad commercial marine port in the early 70s. Leningrad, the main Baltic gate of the USSR, was a bottleneck in European cargoshipping lines. Leningrad's harbour cannot accommodate new quays. Part of the moorage facilities are already on islands and dams. The only way was to intensify the utilization of existing facilities.

The first thing the Leningraders did was to make navigation all-year-round. The port has a fleet of icebreakers which ensures free passage through the ice of the Gulf of Finland. Old quays have been provided with modern container terminals capable of receiving the latest types of vessels. That makes it possible to carry more than 40 per cent of the cargo in packs and containers. Port technology has been completely renewed. There are now three times as many loading machines as 10 years ago, with 50 units of dock equipment for every 100 dock workers, 85 per cent of all loading work is mechanized.

Oleg Terekhov, chief of the Leningrad seaport, has this to say:

The port is a major transport hub where the interests of seamen, rivermen, port workers, railwaymen and road traffic drivers intersect. If there is a delay somewhere, everything comes to a standstill. We had to unite the efforts of all the parties concerned. More than three years ago we invited our constant partners for a round-table discussion. A certain pattern of business relationship had emerged between transport organizations during the years of joint operation at the port. But departmental barriers were an obstacle. Every partner had his own planning procedure, different ways to assess performance, different schedules and incentives to workers. But they were all interested in increasing the volume of loads handled. And the port workers pinned their hopes on that when they initiated talks on coordinating activities. Everybody was in favour of coordination. Punctual arrival of railway cars made for timely loading and unloading and that in turn speeded the turnover of rolling stock.

Then somebody came up with the idea of advance scheduling of loading that would include all the information on the character and volume of loads, the deadlines for loading and unloading and further movement of the cargo. The schedule, drawn up with the help of computers, gives a full picture of the work to be done by each of the partners for 10 days ahead.

That procedure, of course, requires mutual control of the fulfillment of commitments. Every meeting of the coordination group, headed by the port manager, begins with a briefing on joint operations during the previous week.

The new mode of operation increased the port's cargo-handling capacity by 50 per cent within three years. It saved the railways 35,590 cars, which made it possible bo carry an additional 1.5 million tons of freight. The idle time of trucks at the port was cut by one-third and the volume of loads carried from quay to quay by truck increased by 2.5 times.

The transport conveyor system is still being improved, with particular attention to the processing of cargoes by the roll-on, roll-off method in which cargo is not stored on the quay. Compared with 1977, the use of this method increased twofold.

The principles of the Leningrad transport conveyor are being widely adopted all over the country.

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OCEAN AND RIVER

BRIEFS

INTERNATIONAL FERRY--The third and final stage of the international ferry connecting the USSR and Bulgaria at Ilyichyovsk and Varna has been put into operation, increasing twofold the traffic intensity on the sea route. The annual cargo volume will also grow considerably. [Moscow MOSCOW NEWS in English No 4, 31 Jan-7 Feb 82 p 8]

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MISCELLANEOUS

PLAN GOALS FOR 1982 FOR VARIOUS TRANSPORTATION MODES

Moscow TRANSPORTNOYE STROITEL'STVO in Russian No 1, 1982 pp 1-3

[Article: "The New Challenges of Transportation Construction Workers"]

[Text] The second year of the 11th Five-Year Plan has begun. The transportation workers have entered the year with enormous labor and political enthusiasm aroused by the resolutions of the November 1981 Plenum of the CPSU Central Committee and the most recent session of the USSR Supreme Soviet. In his speech at the Plenum, General Secretary of the CPSU Central Committee and Chairman of the Presidium USSR Supreme Soviet Comrade L. I. Brezhnev presented a comprehensive analysis of the focal problems of the country's economic and social development and a thorough political evaluation of the draft plan of the 11th Five-Year Plan. He called attention to difficulties and shortcomings in planning, management, and economic activity and pointed out ways to eliminate them.

Transportation construction workers warmly approved the resolutions of the Plenum of the CPSU Central Committee and the principles and conclusions contained in the speech of Comrade L. I. Brezhnev and have adopted them as a guide to action.

The 1982 plan of the Ministry of Transport Construction envisions further concentration of production capacities and resources to fulfill the most important integrated national economic programs for reconstruction and strengthening of the material-technical base of rail and other modes of transportation.

Significant capital is being directed to construction of the Baikal-Amur Mainline and transportation projects which support the launching of production capacities in key industrial and agricultural sectors.

The plan envisions assignments for further increasing the efficiency of transportation construction primarily by raising labor productivity, reducing expenditure of manual labor, better use of labor and material resources, strengthening economy practices, and eliminating losses.

In 1982 steps are to be taken to improve the use of existing production capacities of the enterprises and organizations of the Ministry of Transport Construction and to launch new ones.

The production program envisions introduction in 1982 of capacities and facilities with a total volume of commodity construction output of 3.5 billion rubles. The plan envisions introducing 372 kilometers of new railroad lines, including the line from Urgal to Berezovka on the eastern arm of the Baikal-Amur Mainline. In the most heavily loaded freight sectors construction of 856 kilometers of double tracks and second tracks is to be completed.

The assignment has been given of electrifying 736 kilometers of railroads. Automatic blocking and centralized dispatching equipment must be installed on 2,473 kilometers of rail lines.

In construction of the Baikal-Amur Mainline temporary operations are to be begun on sectors with a total length of more than 300 kilometers, while the pace of construction is stepped up on the Severo-Muyskiy and cape tunnels and construction begins on the Kadarskiy tunnel.

The plan envisions an increase in the volume of construction at plants of the Ministry of Railroads that repair rolling stock and produce spare parts and switches, including introduction of capacities to repair 900 freight cars at the Panyutino and Stryy car repair plants. Significant volumes of work must be done in construction and reconstruction of junctions and stations, marshalling yards, terminals, and the facilities of the locomotive, car, and other systems of the Ministry of Railroads.

In maritime transportation work must be continued to build docks in the ports of Vostochnyy, Murmansk, Izmail, Riga, Tallinn, Baku, and Odessa. Construction of the second phase of plants near the ports in Odessa and Ventspils will be begun in 1982.

In river transportation the 1982 plan envisions continuation of construction on the mechanized docks in the ports of the West Siberian petroleum and gas complex, Sergino, Labytnanga, Nadym, Urengoy, Nizhnevartovsk, Tomsk, Astrakhan', Kotlas, Khabarovsk and Cherepovets.

In construction of the export gas pipeline from Urengoy through Pomery to Uzhgorod the labor collective of the ministry must lay great lengths of railroad sidings and motor vehicle roads.

Subway construction will continue in Moscow, Leningrad, Kiev, Khar'kov, Baku, Tbilisi, Yerevan, Tashkent, Minsk, Gor'kiy, Kuybyshev, Sverdlovsk, Novosibirsk, and Dnepropetrovsk. In the 11th Five-Year Plan more than 100 kilometers of subway lines will be put into operation in these cities.

Large urban bridges will be built in Moscow, Leningrad, Astrakhan', Krasnoyarsk, and other cities to improve transportation links in 1982. The 1982 plan envisions a considerable volume of work for agriculture, particularly in construction of storage facilities for mineral fertilizer and motor vehicle roads and bridges in the Nonchernozem Zone of the RSFSR.

In addition to construction of production capacities, the Ministry of Transport Construction in 1982 has been given assignments to put residential buildings, schools, preschool institutions for children, hospitals, and other facilities into operation.

In terms of total volume of construction and installation work the 1982 plan exceeds 1981 performance by 2.5 percent, including just 0.4 percent by personnel of the Ministry of Transport Construction.

The plan of contract work for the ministry as a whole is balanced with the labor, material, and financial resources and capacities of the construction-installation organizations. But the high concentration of capital investment at key construction projects led to significant growth in the volume of work for a number of ministries and in certain economic regions, which led to uneven alteration of the workloads of the trusts. For example, the volume of contract work for the Ministry of Railroads (without the Baikal-Amur Mainline), for the West Siberian petroleum and gas complex, and for Kazakhstan is increasing more than 11 percent.

In 1982 the efforts of ministry construction workers should be directed above all to rapidly completing start-up construction projects and reducing the volume of incomplete production. We must check every line to see that planned volumes of work match the makeup of start-up complexes ratified by established procedures and prevent the exclusion of projects and expenditures needed for capacities to be launched. If this correspondence is not achieved, the construction organizations together with clients, establishments of USSR Stroybank, and the main administrations must work out proposals and take steps to increase the planned volume of construction and installation work at start-up projects by an appropriate reduction in the beginning construction projects or stopping certain projects. We must also check to see that times for introduction of residential buildings and other cultural-domestic, public health, and municipal service facilities for comprehensively planned projects correspond to launching times for the production facilities.

Bearing in mind that the volume of commodity construction output established during formulation of the plan is preliminary and subject to refinement taking into account the results of 1981 work, we must establish for each line a refined volume of commodity construction output with a breakdown by quarters in conformity with assignments for launching production capacities and facilities and the estimated costs of construction and installation work for the project, phase, start-up complex and facility.

A great deal of work must be done at construction sites and plants to work out plans for the work, production charts and processes, schedules of performance of construction and installation work at start-up projects coordinated with clients in 1982, schedules for delivery of industrial equipment and assembly components, construction designs, and materials for these projects, coordinated with the Main Supply Administration, the Main Administration for Manufacture of Structural Parts and Elements, the Administration for Production Planning, Supply, and Distribution of Structural Elements, Soyuzgavkomplekt [Main Administration for Insuring Supply of Complete Sets of Equipment, Instruments, Cables, and Other Articles for High-Priority Construction Projects in the Coal, Petroleum, and Other Branches of Industry], and other steps to provide cadres to start-up projects.

The plan assignments for industrial production in 1982 basically meet the needs of the construction-installation organizations. Industrial enterprises of the ministry should manufacture 5,020,000 cubic meters of reinforced concrete structural elements in 1982, which is 9.5 percent more than 1981 performance. This figure will include production of 315,000 cubic meters of wall panels, which is a 13.3 percent increase. The plan envisions raising the production of prestressed structural elements to 1,649,000 cubic meters, including 405,000 cubic meters of PAG-XIV slabs.

Plans envision significantly greater production of progressive structural elements, including frame-panel series II-04 and NIS-04, large-panel dividers, "Sezraskosnyye" [possibly "truss-less"] girders with spans of 14-24 meters, columns for building the supports of small and medium bridges, and reinforced structural elements for subway stations.

The production of metal structural elements is to increase 16 percent over the current level. The 1982 plan also envisions an expansion of the production of other structural elements, an increase in the volume of capital repair of construction and road machinery, and development of new machinery and equipment for transportation construction.

A total of 553 million rubles is being allocated in 1982 for development of the ministry's own production base, including the acquisition of machinery and mechanisms not included in the estimates of construction projects. Plans envision launching enterprises capable of producing 200,000 cubic meters of reinforced concrete structural elements and taking steps to technically re-equip existing enterprises to increase capacities by 60,000 cubic meters.

To improve housing and cultural-domestic conditions for transportation construction workers the plan calls for construction of residential buildings with a total area of 401,000 square meters and preschool institutions for 800 children. The plan also envisions continuing construction on 10 other preschool institutions with room for 1,840 children as well as Pioneer camps and other public health facilities.

In 1982 the ministry has been given the assignment of raising labor productivity over the 1981 level by 3.9 percent in construction and 2.6 percent in industry.

The associations, trusts, and plants have been given somewhat higher assignments for raising labor productivity because of structural and territorial shifts in the plan.

A number of steps are to be taken in 1982 to refine the economic mechanism. They include greater substantiation and balancing of plan assignments than in previous years, identification of start-up complexes and normative conditional net profit in planning-estimate documents and plans, more precise determination of the volume of commodity construction output, and concentrating all types of resources at start-up projects to insure that they are completed on time according to the itemized construction lists.

We must also continue refining and developing introduction of the brigade contract in ministry construction and industry as one of the principal levers for the development of cost accounting, enhancing the role of workers in production management, and achieving the final goals of construction.

During development of quarterly plans assignments should be established for performance of contract work by transportation ministries and key start-up projects which exceed the plan indicators for the association, trust, and construction administration as a whole. We must also establish better control over all start-up projects, and see that monitoring is done on a daily basis and is directed to preventing failure to fulfill plan assignments.

A transition to new wholesale prices and rates is being made on 1 January 1982. The established level of wholesale prices makes it possible to insure conditions for every enterprise to operate profitably. The construction and installation organizations will be compensated for the increased price of materials, structural elements, machinery, electricity, heat energy and other rates.

In 1982 all the industry of the ministry will be switched to planning on the basis of normative net output. At 12 construction-installation trusts plan indicators for labor will also be planned by normative conditional net output.

Socialist competition on the worker relay principle is growing broader. In this type of competition joint socialist obligations that aim at timely introduction of the project are assumed by planners, construction workers, the client, and the plants that manufacture the structural elements and equipment.

A key area of our work is insuring strict economy measures in the use of all types of resources and combatting mismanagement and waste.

The plan establishes an assignment for 1982 to save 9,000 tons of rolled metal, 57,000 tons of cement, 4,700 cubic meters of timber, 25,000 tons of standard fuel, 60 million kilowatt-hours of electricity, and 300,000 gigacalories of heat energy. The associations and trusts should work out organizational-technical measures for additional savings of material expenditures in 1982 beyond these figures, averaging at least 1-1.5 percent compared to the 1981 level, and there should be constant checks on their fulfillment.

The assignments which face transportation and construction workers in 1982 demand an improvement in economic activity and better quality work at all levels of management. We must complete development of the five-year ar annual (for 1982) plans in the labor collectives as quickly as possible and as Comrade L. I. Brezhnev put it, "back up the plan figures with economic and organizational-political steps that guarantee their fulfillment. Organization, business-like attitude, and discipline — these are the essential requirements in Moscow and in the local areas. The activity of all party, state, and economic bodies should be organized from precisely this standpoint."

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MISCELLANEOUS

PROGRESS IN CONSTRUCTION OF GAS PIPELINES NOTED

Moscow PRAVDA in Russian 9 Jan 82 p 1

[Editorial: "Build Gas Pipelines More Quickly"]

[Text] Gas industry workers fulfilled the gas production plan ahead of schedule for the first year of the five-year plan. The national economy received the planned 458 billion cubic meters of gas. As before, Western Siberia is the main source.

Comrade L. I. Brezhnev said at the 26th CPSU Congress: "We must treat gas and petroleum production in Western Siberia and their transport to the European part of the country as important elements of the energy program for the Eleventh and Twelfth Five-Year Plan."

A new transport industry has been created in our country, consisting of unified petroleum and gas transport systems. These systems can pump 95 percent of our petroleum and all of our gas from points of production to points of consumption and refining. All the basic fuel and energy mains originate in Western Siberia. During the 10th Five-Year Plan, more than 50,000 kilometers of these mains were built. The construction of pipelines with a diameter of 1.42 meters for transporting large amounts of natural gas is, in principle, a new development. More than 12,000 kilometers of these mains are already under construction. Each of the great arteries operates with a pressure of 75 atmospheres and carries more power than the combined output of the Yenisey and Angara hydroelectric power stations. The next development will be a new class of mains, designed to operate with a pressure of 100 atmospheres.

On the eve of the new year, one of the best work teams, headed by B. Diduk, USSR State Prize laureate, welded the final joint on the Urengoy-Petrovsk large-diameter gas pipeline. This event marked a regular victory for the Siberian construction workers, since the powerful main, most of which ran through the tundra, marshland and taiga north of Tyumen', is going into operation three months ahead of schedule. During these days of January, the workers are getting ready to transport gas from Urengoy through this main. The national economy will receive many additional millions of cubic meters of the "blue fuel."

The welding and insulation crews have already moved to the next line: the Urengoy-Novopskov. Preparatory work has begun at the Urengoy-Uzhgorod main. The workers at key construction sites are competing among themselves to carry out the plan's tasks and their 1982 socialist obligations ahead of schedule. By the end of the 11th Five-Year Plan, more than 20,000 kilometers' worth of pipelines will run from the polar areas of Tyumen' to the Urals, Volga, central and western areas of the country.

Complex tasks have been assigned to the construction workers, but the tasks must be resolved in the alloted time. The subordinate organizations of the Ministry of Construction of Petroleum and Gas Industry Enterprises have all the resources to accomplish this. Thanks to the enormous daily concern of the party and government about the country's fuel and energy system, specific measures have been taken to assure accelerated development of the gas industry and construction of the main pipelines during the current five-year plan. The production capacity of the construction teams in the north is increasing; housing, cultural and consumer establishments are being erected and management is improving. For example, a Main Board for Urengoy Gas Field Installation was organized at Novyy Urengoy. A main administration was also organized in Surgut, to which the construction workers at the oil field pipelines are now subordinate. These subunits were taken from the Glavsibtruboprovodstoy [Main Administration for Construction of Pipelines in Siberia], which can concentrate all its attention on laying gas mains. An intradepartmental commission to resolve problems of West Siberian petroleum and gas industry development began to work under the auspices of the USSR Gosplan. This commission is to coordinate and regulate the efforts of various departments.

Material and technical support for the construction sites must be substantially improved. By decree of the USSR Gossnab, the year's volume of all material resources for northern regions must be delivered not later than 20 August, so that the materials can be sent to their destinations by inexpensive water routes. However, many enterprises delay shipment of the most needed cargo. Thousands of tons of urgently needed freight arrive in Siberia during the last quarter of the year and are delivered to the gas pipeline sites by airplanes, which costs tens of millions of rubles.

In particular, this was discussed in a letter entitled "Build gas pipelines more quickly." The letter was from a group of leading construction workers building underground mains and was published recently in PRAVDA. To improve support for the construction sites, an extensive network of USSR Gossnab organizations and bases must be created right in the areas where underground lines are being laid. These organizations would be elements of a unified system of regional support and would be independent of departmental subordination.

In Siberian conditions, the progressive modular method for constructing installations is particularly important. This method greatly reduces labor intensive operations and construction costs and speeds up construction. There are also large reserves to be gained by improving design work. It is important that the participants in a construction project, particularly the ministries involved, be oriented toward the most advanced technical decisions and work methods. For example, compressor units must be classified by type and standardized. This would considerably increase the level of industrial methods used in construction of installations. At present, Ministry of the Gas Industry institutions are submitting a lot of different plans of essentially the same kinds of compressor units to construction projects. This complicates matters unjustifiably.

Party committees must increase their supervision over the construction and operation of the new fuel arteries which are important elements of the country's economic organism. The committees must now thoroughly analyze the results of the first year of the five-year plan. They must equip the workers with a new program of action and must move their organizing and educational work to the places where lines are being laid, where the success of the five-year plan's tasks are being decided. It is important that greater demands be made of party personnel and that party committees strive for unconditional execution of state plans.

Uninterrupted pumping of gas through the pipelines will help to successfully implement the year's tasks and will assist the precise operation of our entire national economy.

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